



A I R C A M P A I G N

SOUTH CHINA SEA 1945

Task Force 38's bold carrier rampage
in Formosa, Luzon, and Indochina

MARK LARDAS | ILLUSTRATED BY IRENE CANO RODRÍGUEZ



AIR CAMPAIGN

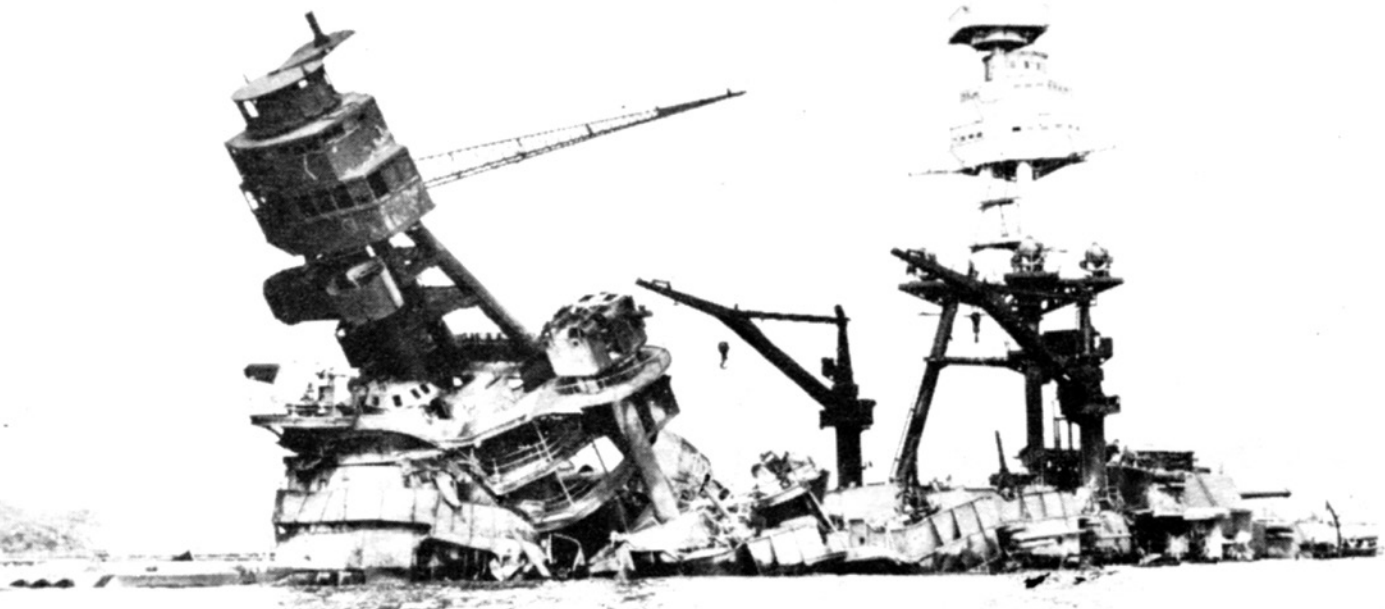
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INTRODUCTION

As *Enterprise* steamed into Pearl Harbor on December 8, 1941, Admiral Bill Halsey, on the carrier's bridge, could see the aftermath of the previous day's attack by Japan's *Kido Butai*, including the still-smoldering wreck of the battleship *Arizona*. (AC)

In January 1945, Admiral William "Bill" Halsey was where he wanted to be: with the US Navy's Third Fleet in the middle of the South China Sea. The fleet's Fast Carrier Force, Task Force 38, was conducting a series of air attacks, hitting Japanese bases and shipping throughout its periphery. If the sea was the face of a clock, attacks were planned around it. Hammer blows would fall from Formosa at 1.00 to Luzon at 4.00, Camranh Bay and the French Indochina coast at 8.00, the Chinese coast from 9.00 to 12.00, then back to Formosa.

It was a campaign Halsey had longed to undertake for three years, ever since he sailed into Pearl Harbor on December 8, 1941. As his flagship that day, the aircraft carrier *Enterprise*, steamed in among the wreckage of the Pacific Fleet's Battleship Force, he wanted revenge. As he stood on *Enterprise's* bridge surveying the carnage, he declared, "Before we're through with 'em, the Japanese language will be spoken only in Hell!"

At the time, it would have been easy for someone, especially a Japanese naval officer, to dismiss this statement as bluster, a meaningless threat by a man whose pride had been wounded as badly as the US Pacific Fleet. Japan had sent 353 aircraft against Pearl Harbor. In two waves of attack, they sank or damaged 20 US Navy warships, including eight battleships, destroyed over 300 US Navy and US Army Air Force aircraft (most on the ground), and killed over 2,400 soldiers, sailors, and civilians. Five battleships were at the bottom of Pearl Harbor.

Over the next 90 days, Japan swept over the Pacific and Southeast Asia. It destroyed US forces in the Philippines, Guam, and Wake Island. It had cleared Great Britain out of Hong Kong, Malaya, Burma, and its Pacific holdings. It overwhelmed the Dutch East Indies and chased Australia out of New Ireland, New Britain, and northern New Guinea. It had taken over French Asian possessions in Southeast Asia, the region known as French Indochina, before attacking Pearl Harbor.

Even though resistance in the Philippines and other parts of the British and Dutch colonial empires had continued in March, by June 1942, Japan held a perimeter that stretched from the Aleutian Islands in the north, swept across the Gilbert and Marshall Islands in the Central Pacific, south to the Solomon Islands, and from there across northern New

Guinea, the Dutch East Indies, and nearly to the Indian border with Burma. Japan also controlled large parts of eastern China; this included the industrialized northern Manchurian region, which Japan turned into the puppet nation of Manchuko. Land communications with China were cut off after Japanese captured the Burma Road. Japan thus stood as a colossus over the quarter of the globe formed by the Pacific Ocean and Eastern Asia.

When Halsey made his oath on *Enterprise's* bridge, the US Navy had only three fleet carriers in the Pacific. Japan had the *Kido Butai's* six fleet carriers that had hit Pearl Harbor, plus eight light carriers in service. The US Navy had lost its battle line. Japan had ten battleships immediately available. Allied air forces facing Japan were also outnumbered and outclassed. Halsey, and the US Navy faced a long path against long odds before he could fulfill a second vow he had made shortly after Pearl Harbor: that he would ride Japanese emperor Hirohito's white horse through the streets of Tokyo when the war ended.

Despite the initial odds against him, Halsey worked to fulfill both oaths over the next three years. He commanded several daring single-carrier raids against Japanese Pacific island bases in the war's opening months. In April 1942, he had commanded the two-carrier task force that launched the Doolittle raid against Japan. Circumstances and illness kept him out of the battles of Coral Sea and Midway, but in October 1942 he assumed command of the South Pacific Area and South Pacific forces, relieving a good friend, Vice Admiral Robert Ghormley.

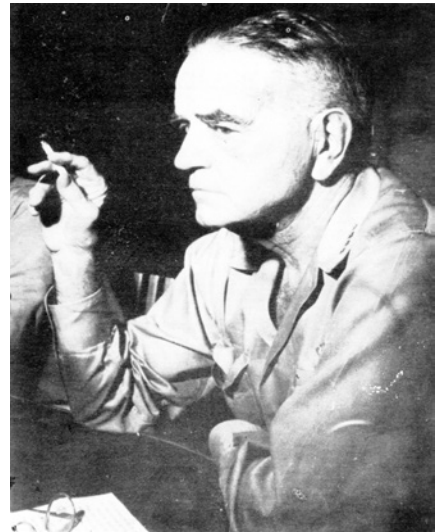
Over the next several months, Halsey turned around a desperate situation in the Solomon Islands. He led his forces to victory, despite a tactical defeat at the battle of the Santa Cruz Islands. Favorable outcomes at the two naval battles of Guadalcanal – combined with his aggressive leadership, Japanese attrition, and US reinforcements – led to ultimate victory in the Solomons by the end of 1943.

His responsibilities and command grew in 1944. In its opening months, he commanded the Third Fleet in the central Pacific. It grew from five fleet and four light fast carriers in February to seven fleet and six light fast carriers in June. The Third Fleet then became the Fifth Fleet and Halsey turned over command to Raymond Spruance.

It was a notional change; only the fleet number and command staff changed. The same ships were commanded by a different admiral. The war – and the US Pacific Fleet – had grown in size to the point where planning grew complex. The Big Blue Fleet – the name given to the ships that formed the Third Fleet and Fifth Fleet – was now large enough, and its operations so complex, that trading command of the fleet between operations required two command staffs. One staff conducted the current operation while a second prepared for the next one.

Halsey regained the Big Blue Fleet in October, leading it during the Philippine invasion. Over the next three months, it fought the battle of Leyte (the largest naval battle in history), conducted several carrier raids against Japanese-held islands, and weathered a typhoon that caused almost as much damage to the Third Fleet as the Imperial Japanese Navy had during the clashes in Leyte Gulf. Halsey was scheduled to turn over the Big Blue Fleet to Spruance at the end of January, allowing Spruance to use it for the planned invasion of Iwo Jima.

While the Big Blue Fleet gained power and size, the Imperial Japanese Navy withered away. Losses in the Solomons left it less able to challenge the US Navy. When it did, it suffered crippling losses. At the battle of Leyte Gulf, the *Kido Butai* carrier force had grown so anemic that it served only as a decoy, to lure TF38 (Task Force 38, the Third Fleet's fast carriers) away from the main offensive thrust. After Leyte, the remnants of the fleet withdrew to its ports in Japan and Japan's remaining overseas possessions. In December, the US Navy was seeking ways to find and destroy these surviving ships and Japan's remaining naval aviation.



Admiral William "Bill" Halsey in a characteristic pose at a conference table: cigarette in hand, with a formidable scowl. He was the architect of TF38's raid into the South China Sea. (AC)



OPPOSITE: STRATEGIC OVERVIEW

The Big Blue Fleet had been at Ulithi in late December 1944, making good the damage it suffered during the typhoon. It was scheduled to support landings planned for Lingayen Gulf in Luzon in early January 1945. In mid-December, the Third Fleet had thrown the “Big Blue Blanket” over the Philippines to cover the Mindoro landings. This consisted of two days of round-the-clock air operations by TF38’s aircraft over Luzon airfields, which successfully kept the Japanese from leaving their bases to launch kamikaze attacks.

Halsey wanted to do more than that for the Luzon landings. He wanted to end his tenure with the Big Blue Fleet with a bang; to send Japan a message signed by Bill Halsey by doing something never before attempted in naval history. He proposed sending TF38 deep into the South China Sea on a ten-day raid. It was something he had been advocating all autumn. On November 21, 1944, following the Leyte landing and before the Mindoro operation, Halsey had asked permission to enter the South China Sea. At the time, Fleet Admiral Chester Nimitz, commanding US Navy Forces in the Pacific, had felt it too risky and denied permission for the operation.

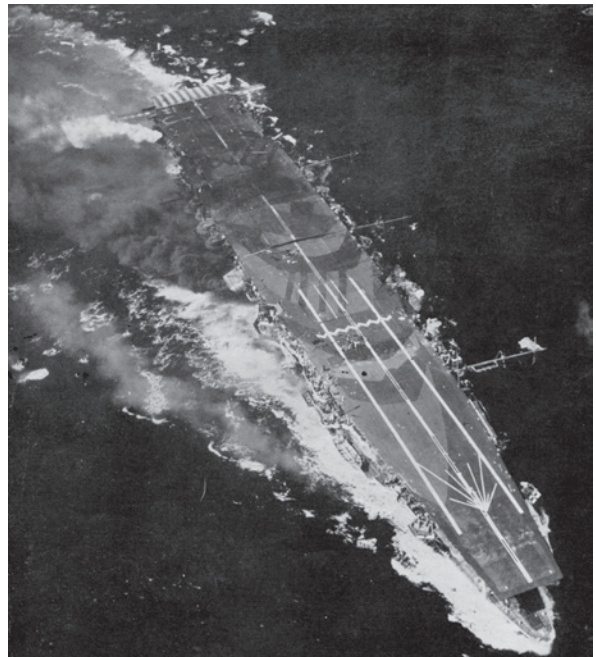
TF38 had launched other strategic carrier raids against Japanese possessions, notably at Truk in February 1944, and most recently against Formosa in October 1944. Raiding the South China Sea took things to a higher level. Previous raids had been one- or two-day affairs. While they ventured within range of enemy land-based aircraft, they did not linger there. Halsey proposed having TF38 operate for an extended period in a sea surrounded by enemy-held land, unsupported by any other Allied forces.

It was aggressive and audacious: classic Bill Halsey. He convinced his superior, Nimitz, that while aggressive it was neither reckless nor foolhardy. If successful, it could cut Japan’s most important strategic artery. Halsey also successfully argued that a Japan chasing TF38 around the South China Sea would be a nation too preoccupied to seriously challenge the Lingayen Gulf invasion. Nimitz, deciding the possible gains justified the risk, approved the operation. Halsey was consequently in the middle of a trailblazing action.

Three years made a big difference. *Enterprise*, his flagship on December 8, 1941, was present, but it was not Halsey’s flagship. He had broken his flag on *New Jersey*, an Iowa-class battleship that could make 33 knots. It had been under construction on December 8, 1941, and was not launched until a year after that. Admiral John S. McCain was in charge of TF38, with Essex-class carrier *Hancock* as his flagship. *Enterprise* was one of two dedicated night-operations aircraft carriers – an important role, but outside mainstream carrier operations.

TF38’s South China Sea sweep had important strategic and tactical military objectives. It had an equally important psychological objective. Halsey was sending the Imperial Japanese Navy and Imperial Japan a message: “Come out and fight. If you do not, the Big Blue Fleet will come to you. It will dig you out of your most secure bases. It will take possession of your strategic waterways. We can even go into the South China Sea and you cannot stop us.”

By October 1944, the *Kido Butai* had been reduced to bait during the battle of Leyte, to lure TF38 away from Japan’s main effort. This is the carrier *Zuikaku* during that battle. The last survivor of the six carriers which attacked Pearl Harbor was now camouflaged as a battleship. (AC)



CHRONOLOGY

1937

July 7 Second Sino-Japanese War begins.

1938

May 13 Japan occupies Amoy.

October 22 Japan occupies Canton.

1939

February 9–11 Japan occupies Hainan.

1940

August 30 Japan wins right to base troops in Luichow.

September 22–26 Japan occupies Tonkin and northern French Indochina.

September 27 Japan signs the Tripartite Pact with Germany and Italy, which guarantees that if a signatory is attacked by a nation with which it is not currently at war, all signatories will declare war on the attacking nation.

October 16 US President Franklin Roosevelt imposes an embargo of scrap iron and steel sales to Japan in retaliation for Japan's occupation of Tonkin.

December 9 France and Japan sign a treaty allowing Japanese forces to occupy all of French Indochina while allowing France sovereignty over its army and civilian administration in Indochina.

1941

July 26 Roosevelt embargoes petroleum sales to Japan and freezes Japanese assets in the United States in retaliation for the announced movements of Japanese troops into all of French Indochina.

July 28 Japan sends 140,000 troops to French Indochina in preparation for invading the Dutch East Indies.

December 7 Japan attacks the US Pacific Fleet in Pearl Harbor and launches concurrent attacks on British, Dutch, and US holdings in the Far East.

December 10 Japanese troops from Formosa land on Luzon in the Philippines.

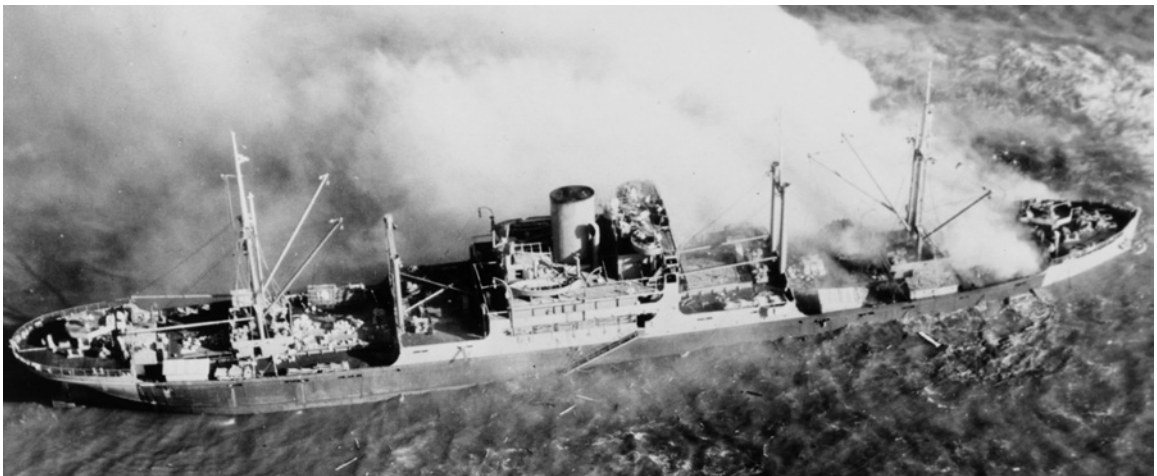
December 25 All Allied forces in Hong Kong surrender to Japan.

1942

January 2 Manila, the Philippine capital, is declared an open city by the US and occupied by Japan.

April 10 US resistance on Bataan in the Philippines ceases.

May 6 Corregidor falls to Japanese invasion and US forces in the remainder of the Philippines are ordered to surrender.



The 7,500-ton troop transport *Kumagawa Maru* is torpedoed by a US Avenger off Cape St Jacques (today's Vung Tau) on the coast of French Indochina. *Kumagawa Maru* was one of six vessels sunk by TF38 in that convoy. (USNHHHC)

1943

February 15–16 Japan occupies Luichow.

1944

October 12–16 TF38 launch air raids against Formosa in advance of the Leyte landings.

October 23–26 Battle of Leyte fought.

November 21 Admiral Halsey proposes raiding the South China Sea with Third Fleet.

November 30 Admiral John S. McCain takes command of TF38.

December 15 Mindoro invaded.

December 28 Admiral Nimitz grants permission for a South China Sea raid by Third Fleet.

December 30 TF38 and elements of TG30.8 (Task Group 30.8) depart Ulithi.

1945

January 3–4 TF38 launches airstrikes against Formosa.

January 6 Lingayen Gulf landings on Luzon.

January 6–7 TF38 launches airstrikes against Luzon.

January 9 TF38 launches airstrikes against Formosa.

January 9-10 TF38 enters South China Sea.

January 11 TF38 launches airstrikes against French Indochina coast, sinking every tanker in a 15-ship convoy.

January 14 TF38 launches airstrikes against Formosa and the China coast.

January 15 TF38 launches airstrikes against Hong Kong and Hainan.

January 20 TF38 exits the South China Sea.

January 21 TF38 launches airstrikes against Formosa, experiencing counterattacks by kamikaze.

January 21 Fourteenth Air Force B-24 sinks the river gunboat *Saga* at Hong Kong.

January 22 TF38 launches airstrikes against Nansei Shoto.

January 22 Japan withdraws all air forces from the Philippines.

January 22 US Army Air Force (AAF) begins bombing targets in Formosa in daylight attacks.

January 26 TF38 returns to Ulithi.

January 28 Third Fleet becomes Fifth Fleet, Halsey and McCain are relieved by Spruance and Mitcher.

February 12 AAF begins long-range patrols in the South China Sea.

February 13 AAF B-25s begin strike missions in South China Sea.

February 19 US Fifth Fleet invades Iwo Jima.

February 22 First successful strike by B-25s on Japanese shipping in South China Sea.

February 26 Iwo Jima secured by US forces.

March Formosa neutralized by AAF.

April 1 Invasion of Okinawa.

April 9 Sea lanes across South China Sea permanently severed.

June 22 Okinawa secured by US forces.

August 6 Japan ceases hostilities.

August 28 Occupation of Japan begins.

September 2 Instrument of surrender signed aboard USS *Missouri* in Tokyo harbor.



ATTACKER'S CAPABILITIES

Task Force 38 at the height of its power

A formation of Grumman Avengers forming up for a strike. The Avenger was the US Navy's primary torpedo bomber from 1942 through to the end of the war. Highly versatile bombers, Avengers operated off fleet carriers, light carriers, and escort carriers. (AC)

The US Navy's sweep into the China Sea resulted from the growing capability of its Pacific Fleet, especially the Fast Carrier Force. The US Navy's forces in the Pacific grew at a phenomenal rate over three years. By December 1944, its Fast Carrier Force consisted of eight fleet carriers and six light carriers, accompanied by nine fast battleships, 16 light and heavy cruisers, and 74 destroyers. They had a total of 956 aircraft in their air groups.

It was a massive number of aircraft, dwarfing the total that the *Kido Butai* launched against Pearl Harbor in December 1941. Intelligence indicated it exceeded the total combat aircraft possessed by Japan within reach of the South China Sea. Moreover, all these carrier aircraft were leading-edge warplanes, more capable than the front-line aircraft the Japanese air forces possessed.

Three years of war had honed the US Third Fleet to a deadly and effective weapon; one that was capable of projecting power and operating independently over long distances. The US Navy had built a logistics infrastructure to keep it supplied and maintained across the vast Pacific Ocean. As 1944 ended, the Third Fleet never lacked the necessary beans, bullets, and black oil it needed to take the war to the enemy. It had effective and innovative weapons and had evolved offensive tactics that got the most out of them.

The real challenge to an attack into the South China Sea would be logistics. The nearest fleet anchorage capable of supporting the Third Fleet was at Ulithi, some 1,400 miles from the entrance to the South China Sea. That entrance marked the campaign's starting point. Ten days of intense combat operations were planned after that, with another week of operations following departure from the South China Sea. TF38 needed to bring with it resupply ships at a scale unprecedented until that point in the war.

It was a test of the attacker's capabilities, in terms of aircraft, logistics and infrastructure, and weapons and tactics. No previous air campaign – and few subsequent ones – had ever required such a test. Coming up short in any of these matters would lead to disaster.

Aircraft

The aircraft the United States Navy used offensively during the Third Fleet's South China Sea campaign were US Navy carrier aircraft. US Navy floatplanes on battleships and cruisers provided rescue and other auxiliary services. Carrier aircraft were all single-engine aircraft. The main carrier aircraft used were the F6F, F4U, SBD, SB2C, and TBF/TBM. Vought OS2U Kingfishers, catapult-launched floatplanes, played an important air-sea rescue role during the carrier raids. Each fleet carrier carried between 38 and 80 fighters, 15–25 dive-bombers (except for the night-flying *Enterprise*, which carried no dive-bombers), and 15–18 torpedo bombers (again, except the *Enterprise*, which carried 27). Each light carrier held 22–25 fighters and eight or nine torpedo bombers.

There were more fighters than previously, but significantly fewer dive-bombers. Nearly two-thirds of the aircraft aboard TF38 carriers – 601 out of 956 – were fighters. Many of these doubled as fighter-bombers. Eighteen were equipped as photo-reconnaissance aircraft and 38 as radar-equipped night fighters. There were 154 dive-bombers and 201 torpedo bombers. One torpedo bomber was equipped for photo-reconnaissance and 35 were radar-equipped night bombers.

In addition to TF38, TG30.8 had seven escort carriers accompanying it, each with 26–32 aircraft. While these were primarily intended to provide resupply aircraft to the Fast Carrier



An F6F-5N flies near a TF38 aircraft carrier. It is fitted with an AN/APS-6 radar in a fairing on the outer-starboard wing. The US Navy made extensive use of radar-equipped night fighters and bombers during the January 1945 South China Sea raid. (USNHHC)



USS *Essex* carried two squadrons of Marine F4U Corsairs during the January incursion into the South China Sea. They are spotted on *Essex*'s deck as part of a deckload strike in January 1945. (USNHHC)

OPPOSITE: THE THEORY AND PRACTICE OF MAST-TOP BOMBING

By 1945, the United States Navy largely abandoned dive-bombing and torpedo bombing against naval targets in favor of fighter-bombers conducting mast-top attacks. Mast-top bombing yielded a higher percentage of hits, and the bombers became fighters once they delivered their ordinance. Against anything except a heavily armored vessel like a fleet carrier, battleship, or heavy cruiser, it was more effective. The South China Sea was filled with targets perfect for mast-top tactics.

Force, at least one of the seven was used to provide combat air patrol (CAP) for TG30.8. The F4F-4 or FM Wildcats were used by those escort carriers for that purpose.

The principal aircraft used by the US Navy in the South China Sea were as follows:

Grumman F6F Hellcat: Appearing in late 1943, the Hellcat was designed to fight the Zero. It was the Allied fighter most feared by Japanese pilots. By 1944, it was the US Navy's primary carrier-based fighter, and remained so through 1945. There were two versions used during this campaign: the F6F-3 and the improved F6F-5 with a more powerful engine. The F6F-5 had largely superseded the F6F-3 by December 1944. Three-quarters of Hellcats in this campaign were the F6F-5 variant. It had a maximum speed of 391mph, a cruising speed of 200mph, a service ceiling of 37,300ft, and a range of 1,500 miles.

All F6F-3s were armed with six .50cal machine guns, while the F6F-5 could be armed with six .50cal machine guns or two 20mm cannons and four .50cal machine guns. In practice, only the night-fighter versions of the F6F-5 – the F6F-5N – carried 20mm cannons. Except for the radar-equipped night fighters, all Hellcats used in this campaign were capable of carrying six 5in. rockets in under-wing racks, along with up to 4,000lb of bombs in a centerline mount that carried one torpedo or one bomb of up to 2,000lb or one bomb of up to 1,000lb under each wing.

Vought F4U Corsair: The Corsair was a single-engine fighter armed with six .50cal machine guns. It could also be used as a fighter-bomber carrying eight under-wing 5in. HVARs (High Velocity Aircraft Rockets) or up to 4,000lb of bombs in under-wing or centerline brackets. It had a top speed of 417mph, a cruise speed of 220mph, a service ceiling of 36,000ft, and a 1,000nmi (nautical miles) range. Entering combat in early 1943, it ended the war with an 11:1 kill ratio, 11 enemy aircraft being shot down for every Corsair lost.

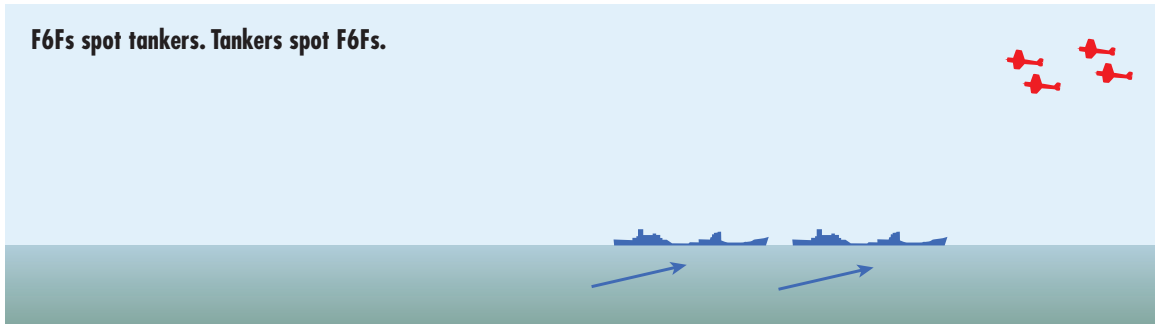
Despite being designed as a carrier aircraft, it proved difficult to land on aircraft carriers. Early in its career it was largely used by land-based Marine fighter squadrons. However, it was such a good fighter that by late 1944 the Corsair was making a comeback on carriers. Only one carrier had Corsairs during this campaign, *Essex*, which had two 18-aircraft Marine squadrons. One squadron used the F4U-1, the first production version with the "birdcage" canopy and the 2,000hp R-2800-8 Double Wasp engine. The other was equipped with the newer F4U-1D, which had a bubble canopy and the more powerful water-injected R-2800-8W Double Wasp engine with up to 2,250hp.

Curtis SB2C Helldiver: This single-engine dive-bomber was used aboard US Navy aircraft carriers during the campaign. The Helldiver, which replaced the Douglas Dauntless as the Navy's primary dive-bomber in 1944, carried up to 2,500lb of bombs, had a maximum speed of 295mph, a cruise speed of 158mph, a ceiling of 29,000ft, and a 1,165nmi range. Only fleet carriers carried dive-bomber squadrons. The Helldiver experienced development problems in early 1944 that had still not been worked out by the end of the year.

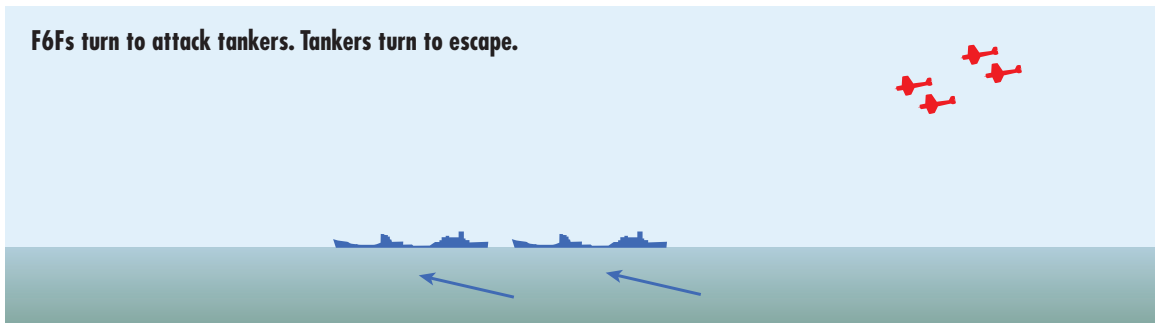
Dive-bombing was the most effective means of attacking large, armored warships. By the end of 1944, however, the Japanese Navy had relatively few large warships left. Opportunities where dive-bombing was most useful were scarce. Mast-top bombing was more effective against unarmored warships and merchant vessels, with low-level bombing more useful against ground targets such as airfields. These tactics could be more effectively used by smaller, more survivable fighter-bombers, which could carry bombloads as large as the Helldiver.

The theory and practice of mast-top bombing

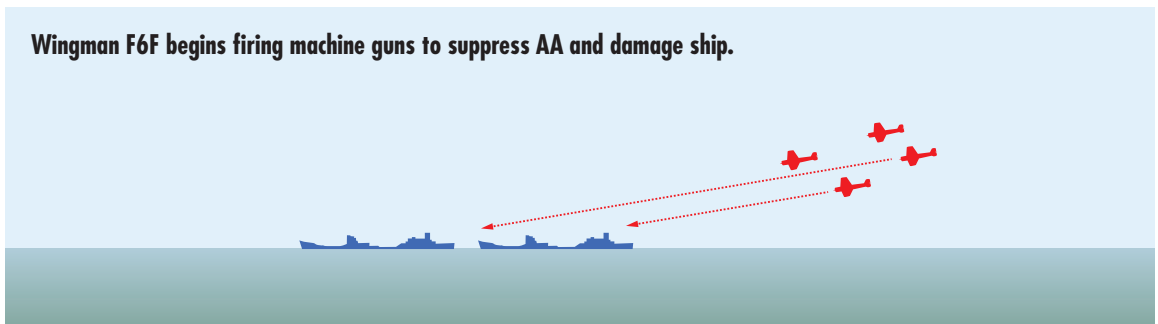
F6Fs spot tankers. Tankers spot F6Fs.



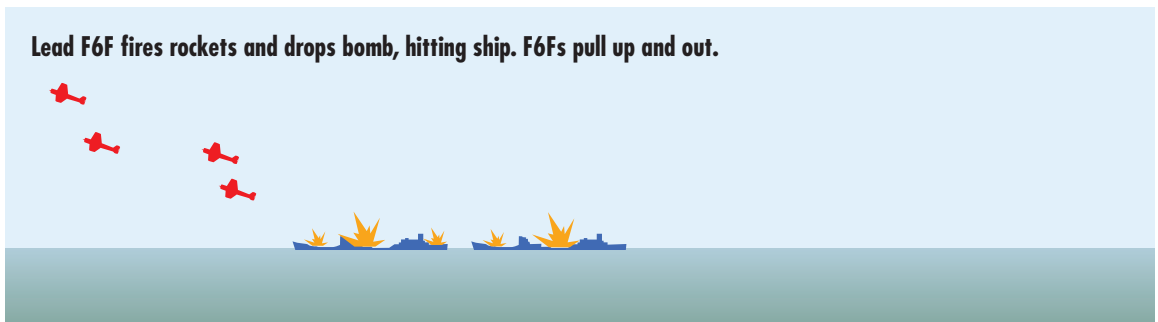
F6Fs turn to attack tankers. Tankers turn to escape.



Wingman F6F begins firing machine guns to suppress AA and damage ship.



Lead F6F fires rockets and drops bomb, hitting ship. F6Fs pull up and out.



Although a few Helldivers were retained against the hope the remaining Japanese heavy warships would come out to fight, they had largely been superseded by fighter-bombers.

Grumman TBF/General Motors TBM Avenger: The Avenger was a single-engine torpedo bomber with a crew of three. It carried a single 18in. aerial torpedo or up to 2,000lb of bombs, depth charges, or mines. It had a top speed of 275mph, a cruising speed of 145mph, a service ceiling of 30,000ft, and a 1,000nmi range. Designed and constructed by Grumman, it was also built under license by General Motors. Aircraft from both manufacturers were used.

The Avenger was much more versatile than the newer and larger Helldiver. It flew as a torpedo bomber against shipping, or as a medium- or high-altitude level bomber against airfields or other land targets, all roles for which there was use in this campaign. Versions including the TBF-1D, TBM-3D, TBM-3E, TBM-3H, and TBM-3N were equipped with centimeter-wave radar, typically in a radome on the right wing. These were used for antisubmarine warfare, radar-guided night bombing, or airborne early warning (AEW). They were used at night as AEW aircraft to help guide night fighters to targets.

Grumman F4F and FM Wildcat: This was the US Navy's primary fleet fighter when World War II began. It held its own against the superior Japanese Zero, but was superseded by the F6F in 1943. The Wildcat was rugged and reliable, with more forgiving takeoff and landing characteristics than the Hellcat. It was used by most escort carriers, typically with 14–16 carried. Intended for antisubmarine or ground support duties, it frequently defended escort carrier units against kamikaze attacks. Armed with four .50cal machine guns, it had a top speed of 331mph and cruised at 155mph, with a service ceiling of 39,500ft, and a 700nmi range. Wildcats manufactured by General Motors were designated FMs.

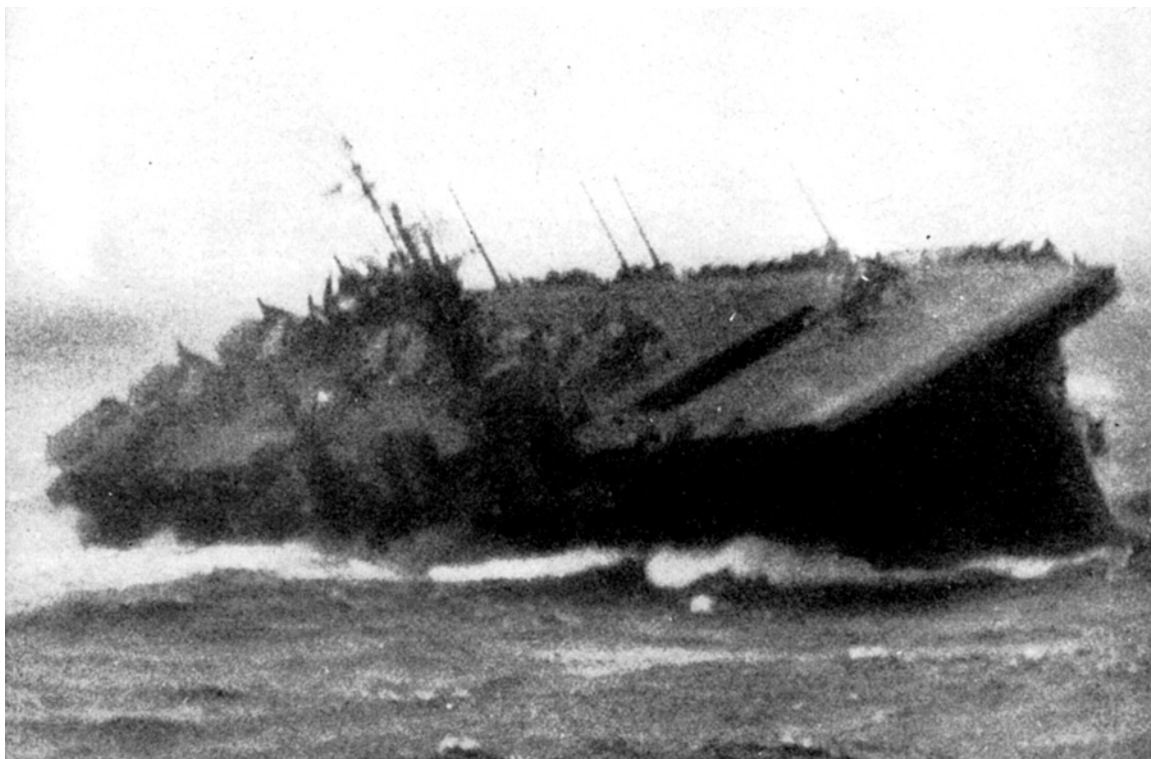
Vought OS2U Kingfisher: The Kingfisher, a catapult-launched floatplane, operated off US battleships and cruisers. It had a maximum speed of 171mph, a cruise speed of 152mph, a service ceiling of 18,000ft, and a 790nmi range. It had one forward-firing fixed .30cal machine gun and one flexible .30cal machine gun aft that was fired by the observer. It carried up to two 325lb depth charges. The Kingfisher was intended to provide reconnaissance, fire control, and observation for US Navy battleships and cruisers. Radar replaced its gunnery-spotting function and carrier aircraft supplanted it for reconnaissance. It served as a lifeguard aircraft during carrier raids, rescuing downed naval aviators.

Facilities and infrastructure

The most important facilities used by aircraft in this campaign were TF38's 14 fast carriers. Fleet and light carriers were fast vessels built as warships, with a top speed in excess of 30 knots. The major difference between fleet and light carriers was size and capability. Fleet carriers in this campaign ranged from 25,000–35,000 tons displacement, carried up to 120 aircraft, and had sizable antiaircraft batteries, including 5in. guns. Light carriers displaced between 10,000 and 13,000 tons, carried up to 30 aircraft, and had only light antiaircraft guns.

All but one fleet carrier in this campaign belonged to the Essex class. Two dozen of them were built. These carriers displaced 35,000 tons loaded, their waterline was 820ft long, they had an 862ft flight deck, could reach 32.5 knots, and could cruise 20,000nmi at 15 knots. They had powerful antiaircraft batteries and excellent internal protection. The other fleet carrier was *Enterprise*, sole survivor of the three-ship prewar Yorktown class. It displaced 25,000 tons. While celebrated, it was inferior to the Essex-class carriers and was being relegated to a backup role. In this campaign, it served as one of two night-operations carriers, with 65 radar-equipped aircraft.

The US light carriers belonged to the Independence class, conversions modified to aircraft carriers from Cleveland-class light cruisers while under construction. Each was 600ft long at the waterline, with a 552ft flight deck. They displaced nearly 15,000 tons fully loaded and



their steam turbines gave a top speed of 31 knots. They could steam 13,000nmi at 15 knots. Designed to carry 45 aircraft, in this campaign they carried just 31.

The various battleships, cruisers, and destroyers assigned to TF38 all had the same mission: protect the fast carriers. Their primary function – including the fast battleship, armed with main batteries of nine 16in. guns – was to serve as mobile anti-aircraft batteries, shielding the carriers from air attack. While battleship and cruiser captains dreamed of an opportunity for a surface action, their need to defend the carriers came first. The destroyers also provided antisubmarine protection.

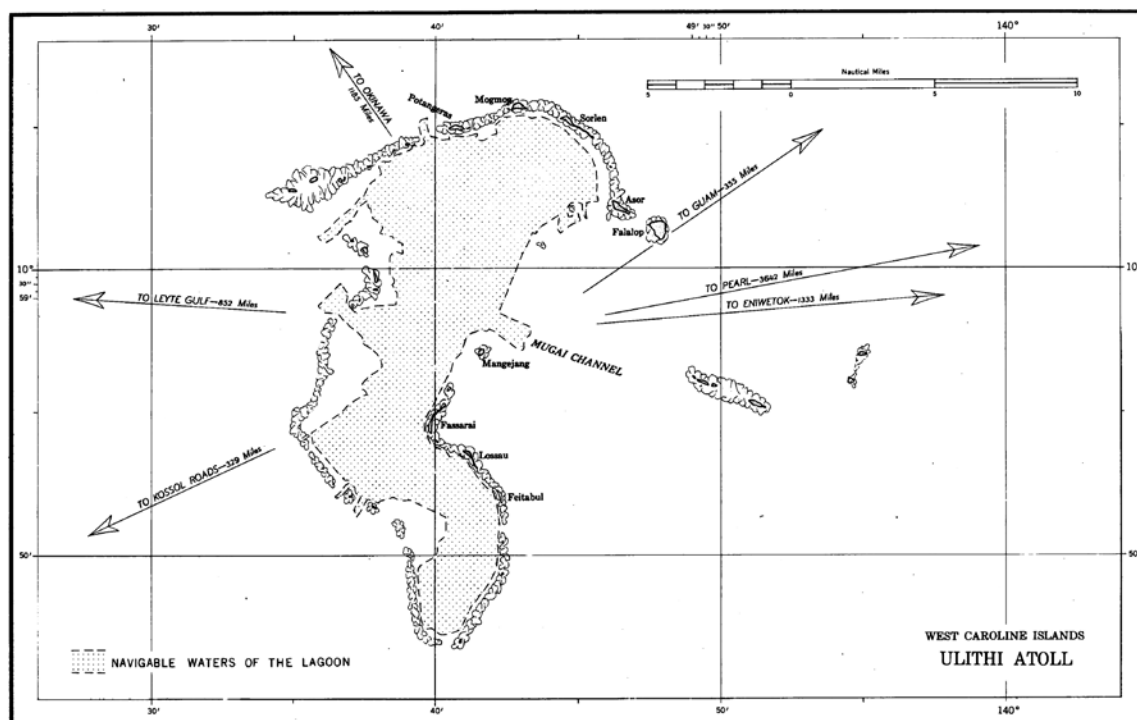
All warships required food, ammunition, and fuel – beans, bullets, and black oil in Navy parlance. It had to come from somewhere. Since 1942, the Allies' Pacific War strategic goal had been to invade and occupy Japan. Tokyo was nearly 4,500nmi from San Francisco, over 4,200nmi from Sydney in Australia, and 5,700nmi from India's east coast. These were global distances. To project power across those distances required a massive and intricately managed logistical system combining island bases and numerous logistics vessels.

The US Navy began the war with a well-provisioned supply and repair center in the middle of the Pacific at Pearl Harbor, Hawaii, their main prewar base in the region. Japan's war-opening attack there concentrated on the US Navy warships in the harbor, neglecting infrastructure targets such as oil terminals, warehouses, dry docks, and ship and aircraft repair and maintenance facilities.

As 1945 opened, the war had moved far west of Hawaii. To provide forward bases for its fleet as it advanced across the Pacific, the US Navy developed anchorages and supply and repair depots along the way. Ulithi Atoll in the Caroline Islands, taken unopposed by the US in September 1944, was the US Navy's westernmost anchorage in January 1945: 2,700nmi from Pearl Harbor and 1,100nmi from Tokyo.

Ulithi became a major facility with 6,000 ship fitters and other repair personnel. The atoll provided a sheltered anchorage large enough to comfortably hold every warship in the US

An Essex-class carrier in a storm in the South China Sea. The Essex-class carriers were the backbone of the Fast Carrier Force. They each carried up to 100 aircraft and were excellent sea boats. (AC)



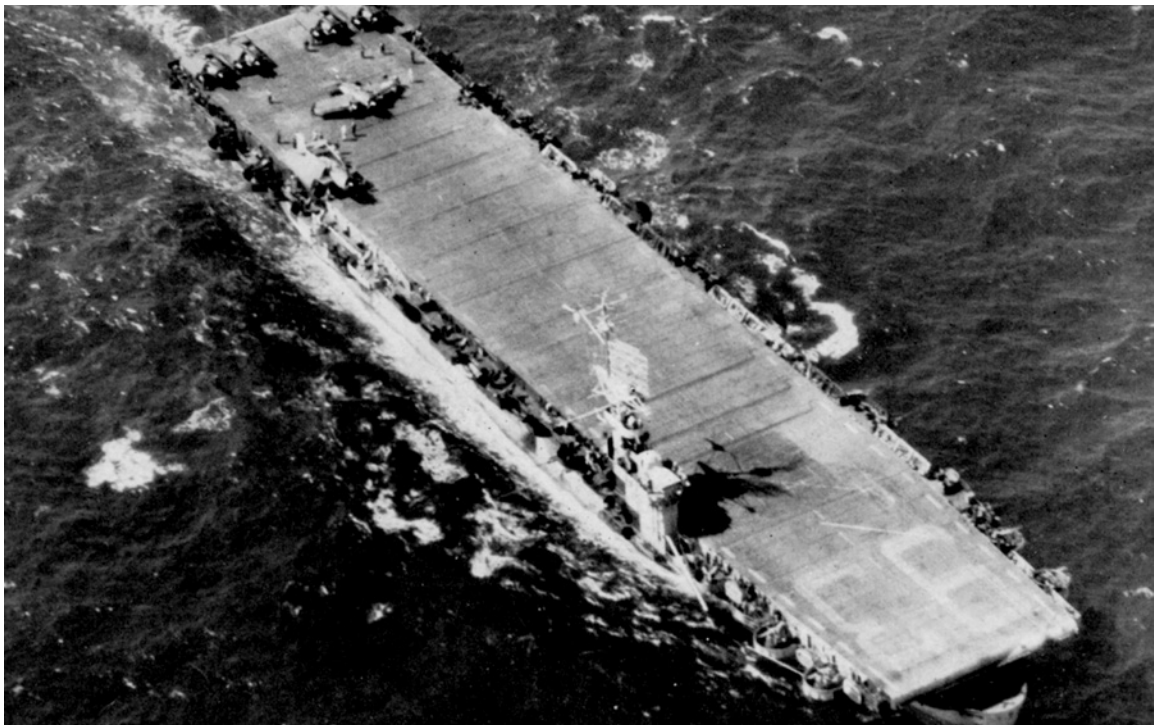
Ulithi Atoll was the US Navy's main anchorage during the winter of 1944–45. It was large enough to hold every ship in the US Pacific Fleet, with room for more. By January 1945, it had extensive logistics and repair facilities. (AC)

Navy, from the smallest PT boat to its largest battleships. It had several floating dry docks, including one which could carry an Iowa-class battleship. Other vessels distilled fresh water, baked fresh bread, and provided other comforts to the US Navy's fleets operating out of the atoll. It even had a concrete-hull ice cream barge capable of producing 500 gallons of ice cream every six hours and storing 2,000 gallons of it aboard.

The US Navy had mastered the art of moving sufficient food, fuel, and munitions to feed the fleet operating out of Ulithi, some 4,700nmi from the West Coast. Nevertheless, Ulithi was over 1,400nmi from the eastern entrance to the South China Sea, through the gap between Formosa and Luzon. US Navy warships from Ulithi could reach that distance, conduct combat operations, and return safely to Ulithi. By December 1944, they frequently had. However, the Luzon Strait was only the starting point for a move into the South China Sea. Operations were planned to last ten days, during which TF38 could easily cover another 2,000nmi steaming at combat speeds. Without resupply, it could end up literally dead in the water.

Even before World War II began, the US Navy led the world's fleets in underway replenishment. Anticipating a trans-Pacific campaign, it created a force of fleet oilers which could fuel its fleet while at sea. After three years of war it had perfected fleet logistics, expanding it to include transferring supplies and ammunition at sea. TF38 was supported by TG30.8, the At Sea Logistics Group of Third Fleet. It consisted of 29 fleet oilers, eight escort carriers, seven ammunition ships, and seven oceangoing tugs, escorted by 14 destroyers and 25 destroyer escorts.

Of the seven escort carriers, one – USS *Altamaha* – was an early escort carrier, built under a Maritime Commission contract at Tacoma, Washington. It displaced 7,900 tons, could make a maximum of 16 knots, and carried 24 aircraft. The rest belonged to the Casablanca class. Displacing 11,000 tons, they were mass-produced at Kaiser Corporation shipyards, built through an initiative of the company's owner, Henry J. Kaiser. Nicknamed Kaiser carriers, they were 490ft long, with a 475ft flight deck, and had a maximum speed of 19 knots. They steamed 10,200nmi at 15 knots and carried 28 aircraft. Fifty Kaiser carriers were built.



Normally, these auxiliaries operated 300–500nmi behind TF38, with TF38 between them and the enemy shore. On previous campaigns, they had fueled the fighting ships a day before they attacked. The auxiliaries would then hover near that point as the Fast Carrier Force made a high-speed run to their target, spend a day or two attacking, then make an equally fast exit run. They would then rendezvous with the auxiliaries, refuel, and (if necessary) rearm. From there, the Fast Carrier Force could launch another set of attacks or return to port, whether to Pearl Harbor or Ulithi.

The extended stay planned in the South China Sea made this impractical. In such dangerous waters, the Fast Carrier Force could not afford to reduce speed to conserve oil. It had to keep its fuel topped up to permit continuous high-speed operation. Part of TG30.8 thus accompanied TF38 into the South China Sea to carry replacement aircraft, fuel, and spare ammunition.

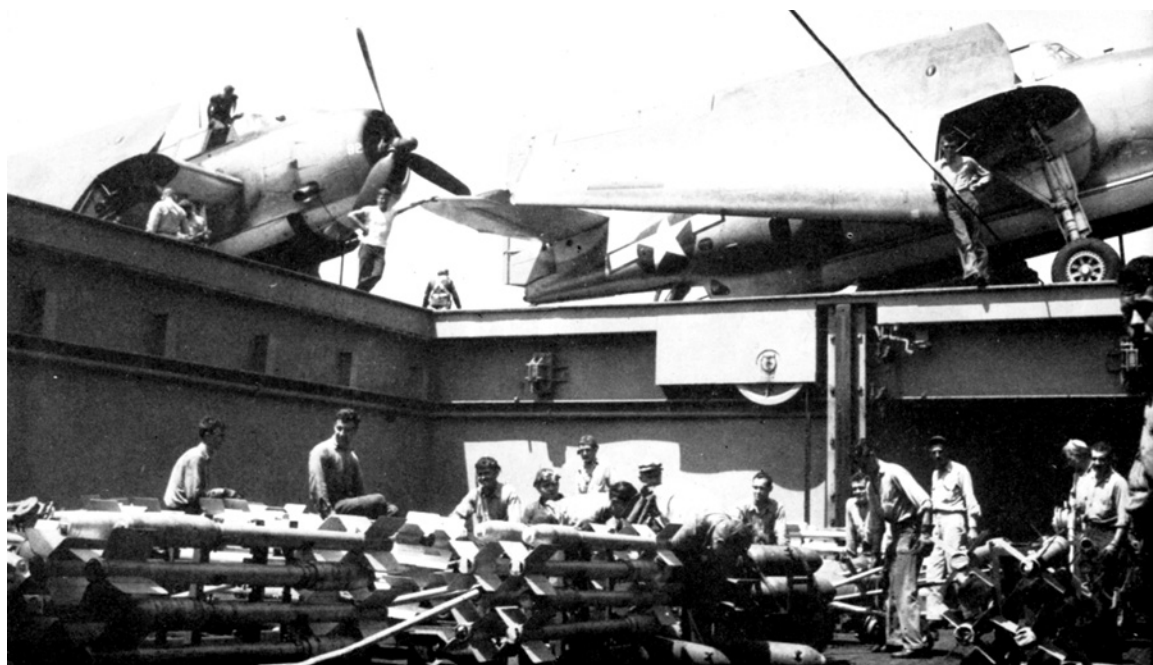
With this fleet train and the mobile airfields provided by aircraft carriers, this would be the first campaign fought by the US Navy in which all facilities and infrastructure used to fight the campaign was mobile. Ulithi, which served just as the starting and ending point, was the only static base used.

Weapons and tactics

The weapons on US Navy carrier aircraft used in the South China Sea included M2 Browning .50cal machine guns, M1919 .30cal machine guns, M2 20mm cannons, a variety of bombs, aerial torpedoes, and the 5in. HVAR. Ship-mounted artillery provided antiaircraft protection for TF38 and TG30.8 against air attack, part of an integrated air defense system.

The M2 .50cal was a highly reliable, air-cooled machine gun. Navy aircraft used a dedicated aircraft version, the AN/M2. The M2 had a muzzle velocity of 2,910fps and could fire 750–850 rounds per minute. The gun fired a 52g bullet, capable of penetrating 1in. of armor and the structural steel of unarmored ships. It was a potent weapon against

TG30.8, the At Sea Logistics Group of Third Fleet, accompanied TF38 into the South China Sea. In addition to fleet oilers, the logistics group included six Casablanca-class escort carriers to provide the Fast Carrier Force with replacement aircraft. (AC)



Pallets of HVAR rockets ready to load on aircraft preparatory to an airstrike. These 5in. rockets traveled at supersonic speed, adding kinetic energy to the effect of the explosive warhead. (AC)§

ships, ground vehicles, and buildings, as well as other aircraft. The M1919 was lighter, firing an 11g round with a muzzle-velocity of 2,800fps. Aircraft versions fired 1,200–1,500 rounds per minute and were effective primarily against aircraft or troops in the open.

The M2 20mm cannon was a US-licensed version of the Hispano-Suiza HS.404 Mk II 20mm cannon and was used by both the US Army Air Force and US Navy. It had a muzzle velocity of 2,800fps and fired 700–750 rounds per minute. It fired a 4.6oz (130g) projectile, and had armor-piercing, high-explosive, and incendiary rounds. The high-explosive round had between 0.21oz and 0.39oz (6–11g) of explosive.

The US Navy used the Mk XIII aerial torpedo against shipping in the South China Sea. Developed in the 1930s, the Mk XIII became operational in 1938. When the war began it had to be launched at low speeds as otherwise it would break up when entering the water, which made it almost useless in 1942. Nevertheless, wartime modifications meant it had evolved into an effective weapon by 1944. A nose drag ring, tail shroud, and fin stabilizer slowed the torpedo enough that it neither broke up nor ran wild on hitting the water. It was 13ft 9in. long, with a 22.4in. diameter, had a 600lb warhead, and could travel 4,000yds at 33.5 knots.

The main bomb used in this campaign was the high-explosive general-purpose bomb. Parafrag (parachute-retarded fragmentation) bombs were also used, especially against airfields with aircraft in the open, as were incendiary and phosphorus bombs. The most common ordinance used was the 500lb M58 and M58A1 semi-armor-piercing bomb. The M57 (250lb) and M65 (1,000lb) bombs were also used. Roughly half the weight in all these bombs was the steel case, the remainder being made up of explosive, typically TNT.

The 500lb bomb was highly effective against small warships, cargo ships, tankers, and harbor craft such as tugs and barges. One hit would cripple these vessels, with a good chance of sinking them. They were also effective against shore installations such as warehouses, hangars, and machine shops. Frame and metal roof construction proved extremely vulnerable to 500lb bombs, which could also fracture runways and concrete foundations.

Against larger warships, including light cruisers, 1,000lb bombs were more effective, although relatively few of these ships were expected to be in the South China Sea. Except the battleships suspected to be in Camranh Bay in French Indochina, no ships worthy of a

2,000lb bomb were present. Helldivers and Avengers could carry four 500lb bombs, allowing multiple attacks. Fighter-bombers carrying three 500lb bombs or six HVARs and a 500lb centerline bomb were more maneuverable and had longer range than those burdened with 4,000lb of bombs.

The HVAR was an unguided rocket intended for use against ground targets. It weighed 134lb, was 68in. long, and had a 5in. diameter. Its warhead weighed 45.5lb and contained 7.5lb of TNT or Composition B explosive. It traveled at supersonic speeds, accelerating past Mach 1, and was capable of penetrating 4ft of reinforced concrete. A volley would devastate a transport or tanker. They could be launched individually, in pairs, or all together.

For antiaircraft defense, the US Navy carried 5in./38cal guns backed up by an array of 40mm Bofors and 20mm Oerlikon antiaircraft guns.

The 5in./38cal gun was World War II's finest dual-purpose gun. It was effective and deadly against aircraft, especially when accurate aircraft altitudes were provided for fusing or proximity fuses were fitted. The shell weighed 55lb, of which 7.1–8.5lb was the bursting charge. It fired 15 rounds per minute, had a 37,200ft ceiling, and could reach low-flying aircraft up to 8½ miles away.

Proximity fuses used a radar unit inside the projectile. When the radar detected an object (hopefully an enemy aircraft), it detonated the shell just after the closest approach, when the range began increasing. This dramatically increased the odds of the shell exploding within a burst radius fatal to an aircraft.

The 40mm gun was a Swedish Bofors design, built under license in the United States. It fired up to 120 2lb explosive rounds per minute, and had a 22,300ft ceiling. To minimize the danger of friendly fire, rounds were fused to explode after traveling 12,000–15,000ft. Within that distance they were deadly.

The 20mm Oerlikon, a Swiss design produced under license, fired a 0.27lb projectile. Its effective rate of fire was 250–320 rounds per minute and it had a 10,000ft ceiling, although it was rarely effective beyond 3,000ft. US Navy doctrine was to begin firing the 20mm guns when the target was 3,900ft away, allowing aimed corrections as the target entered effective range.

Antiaircraft defense started with radar, which guided Allied aircraft towards attacking Japanese aircraft and controlled fire when enemy aircraft arrived within range of shipboard artillery. By December 1944, every warship in TF38 and TG30.8 had radar. Large warships had some version of SK air search radar, which had a 162nmi line-of-sight range. Destroyer escorts were normally equipped with SA air search radar, although some were fitted with SK radar.

By 1944, destroyers and larger warships had fire-control radar to provide both the approach azimuth and altitude of incoming aircraft. These directed the fire of 5in./38cal antiaircraft guns comprising destroyers' main batteries and the secondary batteries of cruisers, aircraft carriers, and battleships.



A quad-mount 40mm Bofors antiaircraft gun. The Bofors was an outstanding medium-weight antiaircraft weapon. When paired with the Mk 14 gunsight developed by Draper Laboratory (which determined the appropriate angle to lead a target), it was devastating. (AC)

OPPOSITE: AIRFIELD ATTACK TECHNIQUES

By January 1945, the US Navy had become very good at attacking enemy airfields, employing three basic tactics:

1. low-altitude strafing by fighters;
2. low-altitude bombing using parachute-retarded fragmentation (parafrag) bombs;
3. high-altitude level bombing.

Each technique had different strengths and weaknesses.

The 40mm Bofors used the Mk 37 director, which was originally an optical system but by late 1944 was radar-equipped. A Mk 51 director developed later improved 40mm performance. The 40mm and 20mm guns could be directed locally using the Mk 14 gunsight, which used gyroscopes to calculate how much to “lead” a moving target. Most of these innovations were pioneered by Charles Stark Draper in the MIT (Massachusetts Institute of Technology) Instrumentation Laboratory.

By late 1944, the US Navy had achieved remarkable competence in containing and controlling battle damage, especially firefighting. Wartime experience revealed fire as the biggest combat risk to ships, especially aircraft carriers, filled with explosives and volatile aircraft fuel. The Navy increased the number of fire mains aboard ships, installing ones powered independently of ships’ engines or adding portable, gasoline-powered water pumps. They were equipped with fog nozzles which sprayed water in a fine mist, maximizing the exposed surface area. Aircraft carriers also carried foaming systems to quench fuel fires.

The Allies developed sophisticated offensive and defensive tactics for aircraft. Offensive tactics included beginning attacks against ships or airfields with a morning fighter sweep. This was used to clear the skies of enemy aircraft before committing more vulnerable bombers and fighter-bombers over enemy airspace. Multiple waves of bombers and fighters were used, permitting follow-up attacks on previously damaged targets, wearing down their opponents.

Defense tactics were also developed to protect against kamikaze attacks. On strike days, radar picket destroyers were placed on either side of the axis of attack 60 miles closer to the enemy than the carriers. They were equipped with air search radar and aircraft homing beacons. CAP missions were maintained over these “Tom Cat” picket destroyers to deal with enemy aircraft.

Friendly aircraft returning from missions flew over Tom Cat destroyers, doing a full 360-degree turn over them. The returning strike then flew to the carriers, tracing a dogleg course. The CAP “deloused” the aircraft over the Tom Cats, identifying friendly and enemy aircraft, attacking any hostiles attempting to sneak in with the returning strike. Any aircraft skipping the Tom Cats, flying a straight course to the carriers, were assumed hostile and intercepted by the carrier group’s CAP.

USS *Maddox* in World War II. *Maddox* served as a “Tom Cat” delousing destroyer during the campaign. It was hit by a kamikaze off Formosa on January 21 while performing that role. (AC)



Airfield attack techniques

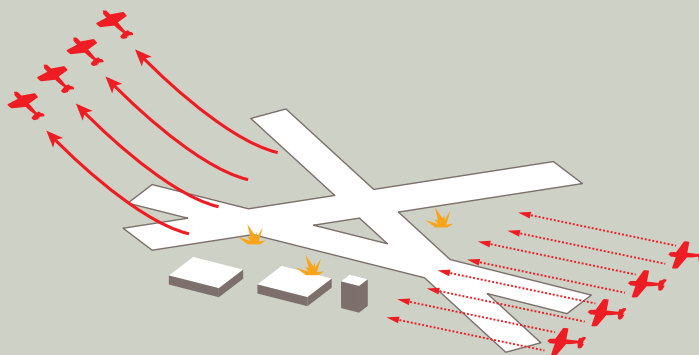
By January 1945 the US Navy had got very good at attacking enemy airfields. They had three basic tactics.

1. Low-altitude fighter strafing

Flights of fighters attack an airfield line abreast at low altitude, firing their machine guns (and if they have them, rockets) as they fly over the airfield.

Advantages: Hard for defenders to counter, effective means of suppressing antiaircraft fire.

Disadvantages: Least amount of firepower, best against aircraft and personnel in open.

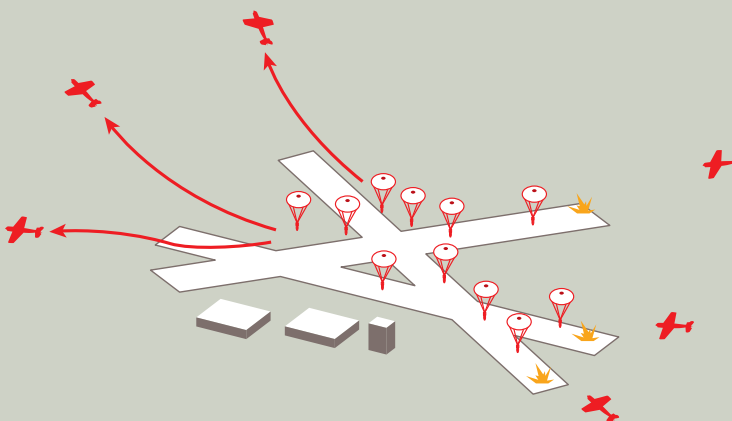


2. Low-altitude bombing with parafrags

Fast bombers (Helldivers, which have 20mm cannon and are more robust than Avengers) make a low-level strafing pass over an airfield dropping parafrags.

Advantages: Hard for defenders to hit low-flying aircraft, parafrags do more damage than gunfire alone.

Disadvantages: Have to time attacks carefully lest following waves get damaged by earlier ones.

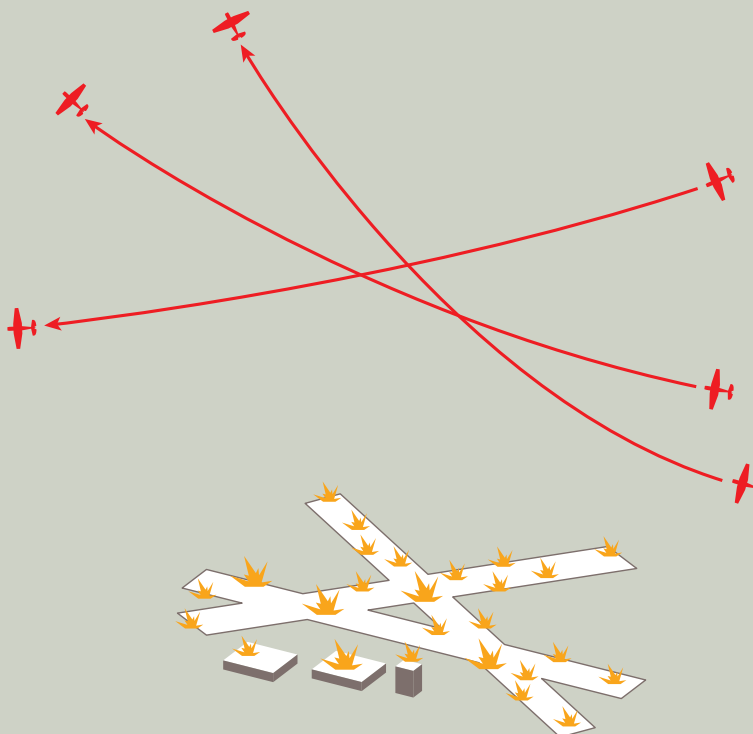


3. High-altitude level bombing

Flights of bombers (typically Avengers) conduct high-altitude level bombing on enemy airfields with HE bombs

Advantages: Above light antiaircraft range, HE bombs can destroy buildings and crater runways.

Disadvantages: Vulnerable to heavy antiaircraft fire.





DEFENDER'S CAPABILITIES

The Japanese in the South China Sea

Early versions of the Yokosuka D4Y Suisei dive-bomber proved failures. Modifications fixed most of its problems. It was the fastest dive-bomber Japan had, and was frequently used as a kamikaze. A D4Y3 struck *Ticonderoga* on January 21, 1945. (AC)

As with the US Navy, Imperial Japan's defense during TF38's sweep through the South China Sea and Ryukyu Islands was the culmination of three years' preparation. In the case of the Japanese, it was three years' lack of preparation. The seeds they had sown in the South China Sea since January 1941 yielded a bitter harvest in January 1945.

They began the campaign with one advantage: an outstanding infrastructure of airbases and naval bases ringing the South China Sea which permitted them to operate aircraft and warships throughout the region. In theory, they could concentrate forces to meet the threat posed by the US Navy and potentially block passage in and out of the sea.

However, executing that required resources the Japanese lacked. They had few trained aircrew in the region and too few aircraft. The majority of the aircraft they had were obsolescent, if not obsolete. Furthermore, the fleet assigned there was intended to fight submarines. Some of its ships had been built before aircraft became a threat. The South China Sea had been a backwater for many years.

Backwater fever plagued the entire Japanese war machine in the South China Sea. Many of the personnel there were second- or even third-class. So was their equipment. The best men and equipment had been sent to active theaters. What remained when the South China Sea became the active theater was what no one else wanted. While there was a lot there, there was no coordination.

Worse, they had inadequate equipment and doctrine. Japan lacked tools to conduct an effective defensive campaign against a determined aerial assault by a capable opponent. It also lacked the temperament for defense, preferring attack. There was no integrated air defense, coordinating aircraft and air defense artillery to repel an incoming airstrike against a single target, much less a coordinated defense for attacks on multiple targets. It lacked adequate anti-aircraft artillery, both in terms of numbers of barrels and effectiveness of individual guns. They were also scattered over a wide area, unable to concentrate against a foe operating from a central position.

Compounding the problem was that the South China Sea was not a unified command. It was at the junction of several commands: Formosa, the Philippines, Indochina and China.



The focus in all commands was outward, away from the South China Sea. Divided command, lack of resources, inferior doctrine, and geography all hindered Japanese preparations and capabilities. They were facing a typhoon of steel, but were unprepared for more than a gale.

Aircraft

In 1944, German soldiers in France used to joke that they could tell the nationality of an aircraft by its color. If it was colored, it was British; if it was silver, it was American; if it was invisible, it was German. Japanese soldiers and sailors in and around the South China Sea in January 1945 could have told their own variation on the joke.

The China and French Indochina coasts of the South China Sea had been a backwater since March 1942. To a lesser extent, so had Formosa. Until summer 1944, they were all deep in the interior of the Greater East Asia Co-Prosperity Sphere. There was little need for aircraft in the area. Combat was nonexistent and flight training was conducted either in Japan or in the Philippines and Borneo. As Japan lacked aircraft and pilots to meet all its needs, combat aircraft assigned to the South China Sea were often reassigned to more active theaters and the pilots retained were the least competent and worst trained. The best pilots were needed elsewhere.

Formosa and the Philippines became Imperial Japan's front line only in October 1944. By then, Japan lacked reserves to guard the South China Sea. What aircraft they had were shoveled into the Philippines or Formosa to stanch the Allied advance. This included the new kamikaze corps. Most aircraft in the Philippines were wiped out by mid-December 1944. Those in Formosa, including a small number of kamikazes, were located to respond to attacks from the Philippine Sea and Pacific, not the South China Sea.

The aircraft remaining to guard the South China Sea were second-line aircraft numbering in scores (at best) at each location. Due to shortages of fuel and spare parts, they spent little time in the air, to conserve them for use when US forces did show up. Since the first indication of the US Navy's arrival was a surprise fighter sweep at dawn, most Japanese aircraft were destroyed on the ground before they could take off. Those few that survived were used defensively to protect airfields and local shipping. Almost nothing was available to seek out and attack the US Navy.

Imperial Japanese Navy and Imperial Japanese Army aircraft participated in the South China Sea campaign, including single-engine fighters and bombers and a few twin-engine night fighters. Although the Army and Navy had developed special attack "*tokko*" units, none had been organized within the South China Sea, and the few available – single-engine Mitsubishi A6Ms and Yokosuka D4Y1s – were stationed on the east coast of Formosa.

A late-war Mitsubishi A6M5 Reisen (Zero or Zeke) fighter. By 1945, the Zero's glory years were in the past. It continued to be extensively used due to the large numbers built and the lack of replacement aircraft. It was used as both a fighter and a kamikaze in this campaign. (AC)



The Mitsubishi A6M (Allied codename Claude) was the Imperial Japanese Navy's primary fighter in the late 1930s. Relegated to training duties after the A6M appeared, some remained in China during the war. They were probably among the aircraft destroyed on the ground there by TF38. (AC)

The primary single-engine fighters available to the Japanese defenders were as follows:

Mitsubishi A6M (Zero; Allied codename: Zeke, Hamp, Rufe): The Japanese Navy's infamous Mitsubishi Reisen (Zero) dominated the Pacific in 1941 and 1942. Yet by late 1944 it was hopelessly outclassed by new Allied fighters, especially the F6F and F4U. Zeros were armed with two 7.7mm machine guns and two 20mm cannons, had a 32,000ft service ceiling, a 1,600nmi range, and a 332mph top speed. They primarily served as fighters in this campaign. A floatplane fighter version, known as the Rufe, had a top speed of 270mph, a cruising speed of 184mph, a service ceiling of 33,000ft, and a 620nmi range. The few Zeros used as kamikazes were fitted with a 250kg (550lb) bomb.

Nakajima Ki-43 Hayabusa (Peregrine falcon; Oscar): The Japanese Army's standard fighter when the war began was this single-engine, low-wing monoplane which carried either two 7.7mm machine guns, two 12.7mm machine guns, or two 20mm machine guns, depending on the version. It had a 330mph top speed, a 26,700ft ceiling, and 950nmi combat range.

The Nakajima Ki-44 Shoki ("Devil Queller"; Tojo): Along with the Hein and Hayate, the Shoki was an early-war replacement for the Hayabusa. All three were low-wing single-engine fighters. The Shoki, introduced in 1942, carried four 12.7mm machine guns, with two in the wings and two firing through the propeller. It had a top speed of 376mph, a cruising speed of 250mph, a 650nmi range, and a service ceiling of 36,700ft. It had a 1,450hp radial engine.

Kawasaki Ki-61 Hien (Flying Swallow; Tony): The only Japanese production fighter with an inline engine, a 1,160hp V-12, the Hien entered service in 1943. It was armed with two 7.9mm machine guns and two 20mm cannons. It had a top speed of 360mph, a 310nmi range, and a service ceiling of 38,100ft. Due to its short range it was primarily used for point defense of airfields.

Nakajima Ki-84 Hayate (Gale; Frank): A first-line fighter introduced early in 1944, the Hayate was the only one nearing the capabilities of the American Hellcat or Corsair. It was armed with two 12.7mm machine guns and two 20mm cannons, and had a 2,040hp radial engine, which gave it a top speed of 427mph. It had a 38,800ft ceiling and a 1,171nmi range. The few Hayates participating in this campaign were in Formosa.

Also present were Nakajima Ki-27 (Nate) and Mitsubishi A5M (Claude) fighters. Both were Imperial Japanese Army and Navy (respectively) prewar designs. They had fixed landing

gear and open cockpits, and were armed with two 7.9mm machine guns firing through the propeller. Both had been retired by December 1941, and were used as trainers during the Pacific War. Some were stationed in China and thrown into battle as fighters for lack of better alternatives.

Japan had three main twin-engine night fighters: the Kawasaki Ki-45 Toryu (Dragon Slayer; Allied codename Nick), Kawasaki Ki-102 (Randy), and Nakajima J1N1 Gekko (Moonlight; Irving). The Toryu and Ki-102 were built for the Army; the Gekko and Ginga were Navy aircraft. The Toryu and Gekko were designed in the late 1930s, entering service in late 1941 and early 1942. They had a top speed of 336mph and 315mph respectively. Both were heavily armed: the Toryu carried one forward-firing 37mm and 20mm cannon; the Gekko carried a mix of up to four upward- or downward-firing 20mm cannons.

Both the Toryu and Gekko were converted to night fighters once airborne radar became available. They were large enough to take the sets, but too slow to be effective daytime fighters. They were handicapped by poor training for the radar operators and poor radar performance. They were also handicapped by small numbers: just 1,700 Toryus and fewer than 500 Gekkos were built, many early in the war. The Ki-102 was a replacement for the Toryu, entering service in 1944. It had a top speed of 360mph and a 32,000ft ceiling. Superior to earlier night fighters, only 200 entered service before the war ended. These three night fighters played a minimal role in the South China Sea campaign, mainly in Formosa.

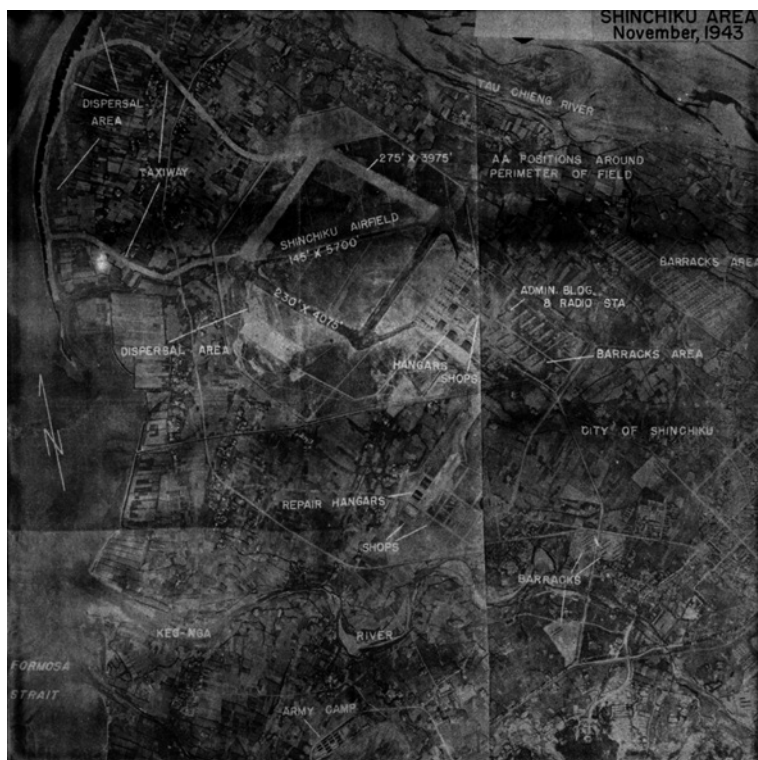
The only Japanese bomber with a significant role in this campaign was the Yokosuka D4Y3 Suisei (Allied codename Judy). It was intended as a dive-bomber, replacing the Aichi D3A, but had a troubled development. Nevertheless, it had developed into an effective dive-bomber by December 1944. It was fast (a 342mph maximum speed), with a 910nmi range and a 35,000ft service ceiling. Armed with two forward-firing 7.7mm machine guns and one rearward-firing flexible 7.7mm machine gun, it could carry 1,000lb of bombs. Although designed as a carrier aircraft, during this campaign it only operated from land bases. A small number of these were used as kamikazes in the South China Sea.

Facilities and infrastructure

Japan had an extensive set of facilities to support operations in the South China Sea. Formosa had been part of the Japanese empire since 1895. While Japan's oldest Chinese holdings were in northern China, during the Second Sino-Japanese War (which started in 1937) the Japanese established footholds on coastal cities and islands along China's entire South China Sea coast, where they had built major military airfields during the 1930s. Japan entered French Indochina in September 1940 and occupied the entire colony in July 1941. Naval and air facilities were established in all of these prewar conquests.

The most developed was Formosa, longest held of the Japanese conquests, which had naval harbors and facilities in Formosa and the nearby Pescadores Islands since Japan established its rule there. The principal naval facilities were at Takao on the southeast corner of Formosa and at Keelung, the principal harbor of Taipei (Formosa's largest city and present-day Taiwan's capital) in the northeast. These were being supplemented by a new naval base under construction in 1944 and 1945 at Tainan. There was also a minor naval base and anchorage at Mako in the Pescadores. Other, primarily commercial harbors dotted Formosa's coast, in which Japanese warships occasionally sheltered.

During the 1920s and 1930s, Japan established two dozen military airfields on Formosa and several seaplane bases. Around ten of them had paved runways and extensive facilities, including aircraft manufacturing and repair centers at Okayama, Heito, and Shingchiu. The most important Formosan airfields besides these were at Einansho (an air depot), Matsuyama, Kiko, Kagi, Choshu, and Taito. There was also Chomosui in the Pescadores. Many of the Formosan airfields were clustered in the south, built prior to the Pacific War to support an



Japan had an extensive network of developed airfields in Formosa prior to the start of the Pacific War. One of the largest was Shinchiku airfield in central Formosa. Its 1943 appearance is captured in this target map. (AC)

developed by France, were improved by Japan after they took over. Camranh Bay served as a springboard for the Japanese invasion of the Dutch East Indies.

Outside the South China Sea, airfields in the Ryukyu island chain played a role, notably the airfields on Yayeyama, Miyako Rhetto, Okinawa, and Ie Shima. Ishigaki Jima on Yayeyama, Uruku and Yonton on Okinawa, and Ie Shima were improved airfields with paved runways. All were targets of TF38 during the South China Sea campaign.

Many of these bases were well defended by Japanese standards, strongly protected by antiaircraft guns. There were also fortifications in Formosa to defend against landings, with adequate road and railroad communications for most facilities. Japan thus appeared to have everything it needed to stop an enemy incursion into the South China Sea.

The South China Sea played a critical role in Imperial Japan's strategic infrastructure. It, along with the waters north and west of the Ryukyu chain, was the empire's highway. Japan started the Pacific War to secure strategic resources. The Home Islands and Manchukuo provided sufficient iron and coal to meet Japan's needs, but it lacked most other important resources. Primarily, it could not produce enough food to feed its population. Japan's stated reason for seizing French Indochina was to block the import of war materials to China through the territory's northern ports, yet at least as big a consideration was securing Indochina's rice fields.

Japan also lacked domestic sources of aluminum, cotton, wool, phosphates, rubber, tin, copper, and – most vitally – petroleum. It imported 82 percent of the petroleum it consumed. The US embargo of scrap iron and steel in October 1941 was a nuisance. When the US embargoed petroleum products in July 1941, Japan chose to go to war to secure access to its own sources of oil. The main thrust of the Japanese advance was into what were then the Dutch East Indies, and the oilfields in Malaya and Burma and on Borneo and Sumatra. These were also vital sources of rubber, tin, bauxite, and copper for Japan. Additionally, Burma was another rice bowl to feed Japan's population.

invasion of Luzon and the Philippines. There were so many that several had been abandoned as surplus by 1945.

A similar situation existed on the coast of China. Chinese ports were mainly used for cargo. As in Formosa, Japanese warships sheltered in them as necessary, for fuel and supplies. The Chinese coast was so far within the Japanese Empire that there was little need for naval bases there. Japan had built a network of developed airfields along the coast, with major airbases at Amoy, Swatow, Canton, Luichow, and Yulin (on the island of Hainan). Hong Kong, a British crown colony captured by Japan in 1941, also had important port and air facilities, including the best naval yard on the Chinese coast.

French Indochina had important facilities too, including a major port at Haiphong, an Imperial Japanese Navy anchorage at Camranh Bay, and airfields at Saigon, Tourane, and Qui Nhon. All of these, originally



The South China Sea was one of Japan's most important links in its convoy network. This map shows Japan's major convoy routes, underscoring the importance of the South China Sea. Critical cargoes had to cross it to reach Japan's industries. (AC)

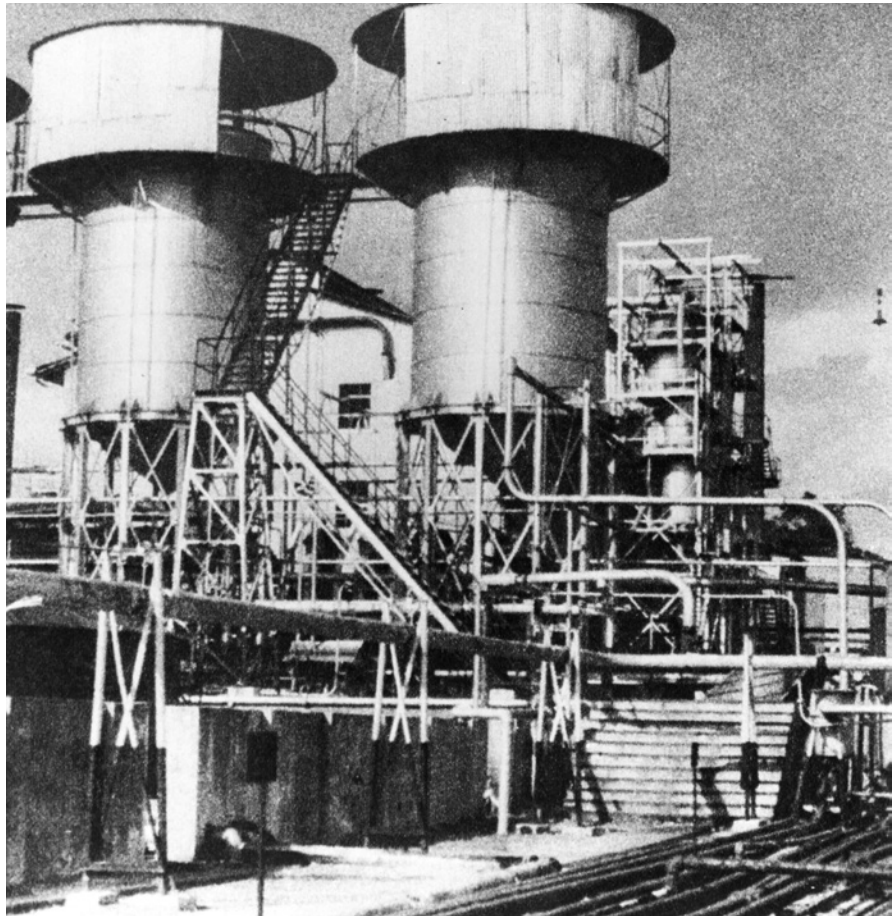
All of that material had to get to Japan. Imports from Korea and Manchukuo crossed the Sea of Japan, while those from central China went over the Yellow or East China Sea. Everything else, including vitally needed oil and rubber, passed through the South China Sea.

For three years, the South China Sea had been a Japanese lake. No enemy aircraft or surface ships penetrated it. Only submarines challenged Japanese maritime supremacy in those waters. Over those three years, Japan had built an elaborate network of convoys to bring strategic goods from its conquered possession to the Home Islands via the South China Sea. Japanese harbors offered shelter to ships traveling across it, places for them to refuel and if necessary repair. They also provided bases from which the short-range antisubmarine escorts could operate. The most vital convoy routes crossed the South China Sea, converging on the Taiwan Straits before crossing the East China Sea to Japan.

This created a vulnerable jugular. If the flow of strategic goods across the South China Sea was interrupted, even temporarily, Japan's industrial engine would stall, stuttering until the supply resumed. If the flow was permanently cut, Japan's industries and its war machine would grind to a halt.

The movement of vital goods could be stopped in one of two ways. Firstly, it could be interrupted by the presence of an enemy fleet or aircraft. That would be temporary only for as long as Japan held the Philippines or Formosa. There was no base from which enemy aircraft

An oil refinery at Balikpapan in Borneo (then part of the Dutch East Indies). Japan started the Pacific War to seize control of the rich oilfields at the southern end of the South China Sea. (USNHHC)



could reach the South China Sea, except perhaps aircraft carriers. Japanese war planners did not believe that carrier airpower could effectively interrupt traffic across the South China Sea, judging it would be too risky for the carriers.

The second way to cut Japan's maritime transportation was to sink enough merchant ships, especially tankers, to deprive Japan of the sealift required to carry sufficient vital supplies. US Navy submarines had been making heroic efforts to do just this. Throughout 1943 and 1944, they whittled down Japan's merchant marine from a high of 6 million tons in December 1942 to just 3 million tons as 1945 started. Nevertheless, this was not enough to precipitate the desired collapse. The losses were bad, but not yet catastrophic.

Losses could, however, become calamitous if an enemy could find a way to penetrate into the harbors and shallow waters on the South China Sea route where submarines could not reach. While merchant ships could comfortably travel in water as shallow as 10 fathoms, it took a bold submariner to penetrate the 20-fathom line. To target these shallow waters required aircraft.

Weapons and tactics

The weapons used by Japan in this campaign can be divided into three broad categories: aircraft guns, antishipping bombs and torpedoes, and antiaircraft artillery, both land-based and aboard ships. The aircraft it used in the campaign were armed with three principal types of guns: the 7.7mm machine gun, 12.7mm machine gun, and 20mm cannon.

The 7.7mm machine gun was used on early-war fighters. A rifle-caliber gun, whose design dated to World War I, Japan mounted them as had their Great War predecessors: in the nose of the aircraft, synchronized to fire through the propeller arc. There were two essentially identical versions used: the Navy Type 97 aircraft machine gun and the Army Type 89 machine gun, used by aircraft of their respective services. It was a licensed copy of the British Vickers .303 machine gun and fired a rifle-caliber round which weighed 6.9g. Like the US .30cal, it was effective against troops in the open and unarmored aircraft. It could also be used against armored carrier aircraft, but was relatively ineffective.

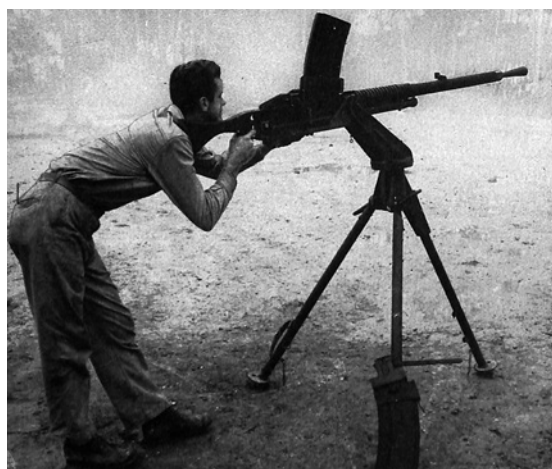
Late-war fighters used the heavier 12.7mm (.50cal) Type 1 (or Ho-103) machine gun. Introduced in 1941, it had a higher rate of fire but lower muzzle velocity than the US M2 .50cal machine gun, which it was a development of. The lower muzzle velocity yielded less kinetic energy and less penetrating power than the M2.

The Japanese Navy used the Type 99 Mk 1 and Mk 2 20mm autocannon for its aircraft, while the Army equipped its aircraft with the Ho-5 20mm cannon. The Type 99 was developed from the Oerlikon 20mm, while the Ho-5 was an up-gunned M2. The Type 99 Mk 1 fired a 200–203g round, the Mk 2 a 221–224g round and the Ho-5 a 112g round. The Type 99 Mk 1 had the lowest muzzle velocity, while the Ho-5 had the highest.

The only attacks against US ships in this campaign were made by aircraft, typically kamikazes. By January 1945, skilled Japanese dive- and torpedo bomber pilots were scarce. Those available were not in the South China Sea. Instead, Japan was increasingly relying on special attack (*tokku*) aircraft, which the Allies called kamikazes. Kamikazes were typically fitted with a 250kg (551lb) bomb, on the light side for sinking a ship. More damage was typically done by the fires started by the aviation gasoline in a kamikaze, especially on aircraft carriers. However, Japan kept no kamikazes in the South China Sea, which, as we have seen, was a backwater. The only kamikazes available were those stationed in Formosa, and there were relatively few there. Most had been sent to the Philippines to oppose the expected Luzon landings.

More important than aircraft in this campaign was antiaircraft artillery. While Japan had a lot of antiaircraft artillery, flak never caused attacking US Navy aircraft serious casualties. The heaviest Japanese antiaircraft artillery, the 12.7cm gun, fired a 23–23.45kg shell, and the 12cm gun a 20kg round. Both had a theoretical effective ceiling of 25,000–27,000ft. The Model 88 75mm antiaircraft gun fired a 6.2kg projectile with an effective ceiling of 21,000ft, and the Model 10 3in. gun a similar projectile that was effective only up to 18,000ft. They were all relatively effective against level bombing at moderate to high altitudes below 20,000ft.

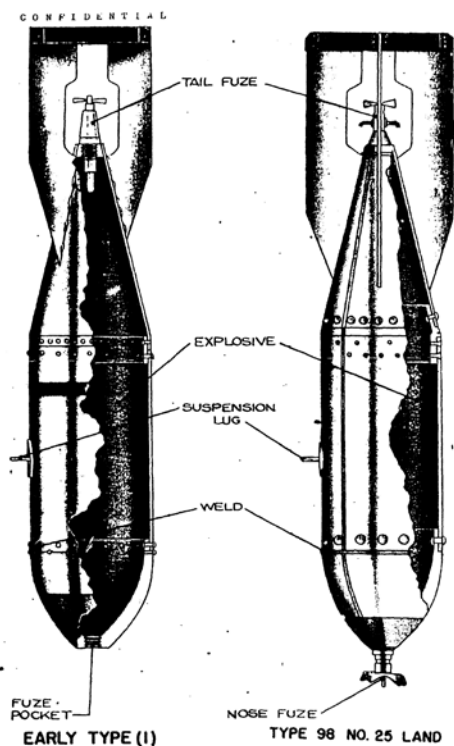
The ceiling rarely mattered since US Navy carrier aircraft attacked airfields and ground installations at low altitudes and favored mast-top strikes against ships. Naval aircraft were also small, fast, and maneuverable, making them difficult to hit. Additionally, heavy antiaircraft artillery depended on time-fused shells, relying on a predictable distance for effective use. The shell burst, rather than direct hits, destroyed most aircraft. Low-flying aircraft constantly changed distance, nullifying the ability to explode the shell



A Type 93 13mm machine gun. Variants of this gun were used in Imperial Army aircraft and light land-based and ship-mounted antiaircraft guns. Guns used by fighters were belt-fed, but most ground and sea-based Type 93 guns used 30-round magazines, limiting their usefulness. (AC)

An Imperial Japanese Army Model 10 75mm antiaircraft gun. Effective against high-altitude level bombers, the US Navy's mast-top bombing tactics severely reduced the gun's effectiveness. The constantly changing distances of low-flying bombers made it difficult to fuse the shells properly. (AC)





JAPANESE 250 KG. G.P. H.E. BOMBS

The 250kg high-explosive bomb was Japan's weapon of choice for kamikazes. It lacked the power to sink a warship, even a destroyer, with a single hit, even with the additional damage the attached aircraft caused. Collateral damage through fire or secondary explosion of nearby ammunition was required. (AC)

the ship they were attacking.

Japanese inattention to anti-aircraft artillery was part of a larger pattern in the Japanese military, which focused almost exclusively on attack, neglecting the defensive. It had been a policy pursued since Japan's arrival in the industrial world in the mid-19th century. It was a simple doctrine: hit your opponent hard enough with the first blow and he cannot strike back, or if he does, it will be ineffective. A corollary was that any resources used for defense were resources unavailable for attack.

This policy had been followed successfully since the First Sino-Japanese War of 1894–95, most notably in Japan's upset victory in the 1904–05 Russo-Japanese War. It had become doctrine by the 1930s (despite leading Japan into an unending war with China, where it won every battle but could not force a peace). It was consequently the basis of Japan's planning for the Pacific War. Indeed, it seemed the smart choice during the war's first six months, when Japan swept everything before it.

However, its strategic failings became manifest in the months following June 1942, as the Allies counterattacked. Moreover, the Allied counteroffensive revealed the policy's tactical shortcomings. The result was not just the neglect of air defense artillery, as Japanese aircraft lacked armor and self-sealing fuel tanks to save weight, which left them easy to destroy. Naval damage control was also neglected, being inferior to that of the US Navy, leading to much wastage. While US warships frequently returned to port after suffering massive damage, especially during 1944 and 1945, Japanese vessels with lighter damage often sank due to poor damage control. Similarly, while Japan had radar, it never integrated it into an overall air defense system. This rendered its airbases and shore installations (and ultimately its Home Island cities) vulnerable to Allied air attack.

All these weaknesses would be exposed during TF38's sweep into the South China Sea.

at a predictable distance. A direct hit was required, but the volume of fire was too low for high numbers of hits.

Heavy anti-aircraft artillery was largely limited to shore installations in this campaign. The 127mm main guns on Japanese destroyers and frigates had too low a rate of fire for anti-aircraft use. Naval dual-purpose 127mm guns were limited to secondary armament of cruisers, carriers, and battleships; those types were absent from the South China Sea. Older smaller warships and armed merchant ships often carried 120mm, 88mm, or 75mm anti-aircraft guns, but rarely in quantities sufficient for a heavy barrage. They also tended to be older, less effective versions of these guns.

Japanese medium and light anti-aircraft artillery was more useful, but only marginally. It was limited to the 25mm autocannon, 20mm autocannon, and 12.7mm and 7.7mm machine guns. The 25mm version had the potential to be an excellent medium anti-aircraft gun, despite being on the light side. It was effective up to 5,000ft and fired a .25kg shell. The Japanese 20mm gun had performance compatible with the Oerlikon, but the 12.7mm and 7.7mm machine guns were too light to achieve a kill with one or two hits.

All these guns suffered a fatal flaw: they were magazine-fed weapons, rather than belt-fed. The magazines were small: 15 rounds for the 25mm gun and 30 for the machine guns. They could thus fire only short bursts before requiring reloading. Crews typically held fire until enemy aircraft were close, to assure a hit. Meanwhile, the belt-fed machine guns of the carrier aircraft would open up at long distances, their fire suppressing the light anti-aircraft guns of



CAMPAIGN OBJECTIVES

Japan's critical sea route

For three years, the South China Sea had been an Imperial Japanese lake. Between the third week of December 1941 and the mid-December 1944 invasion of Mindoro, no Allied surface warship or aircraft penetrated its waters. Only US Navy submarines had visited the South China Sea.

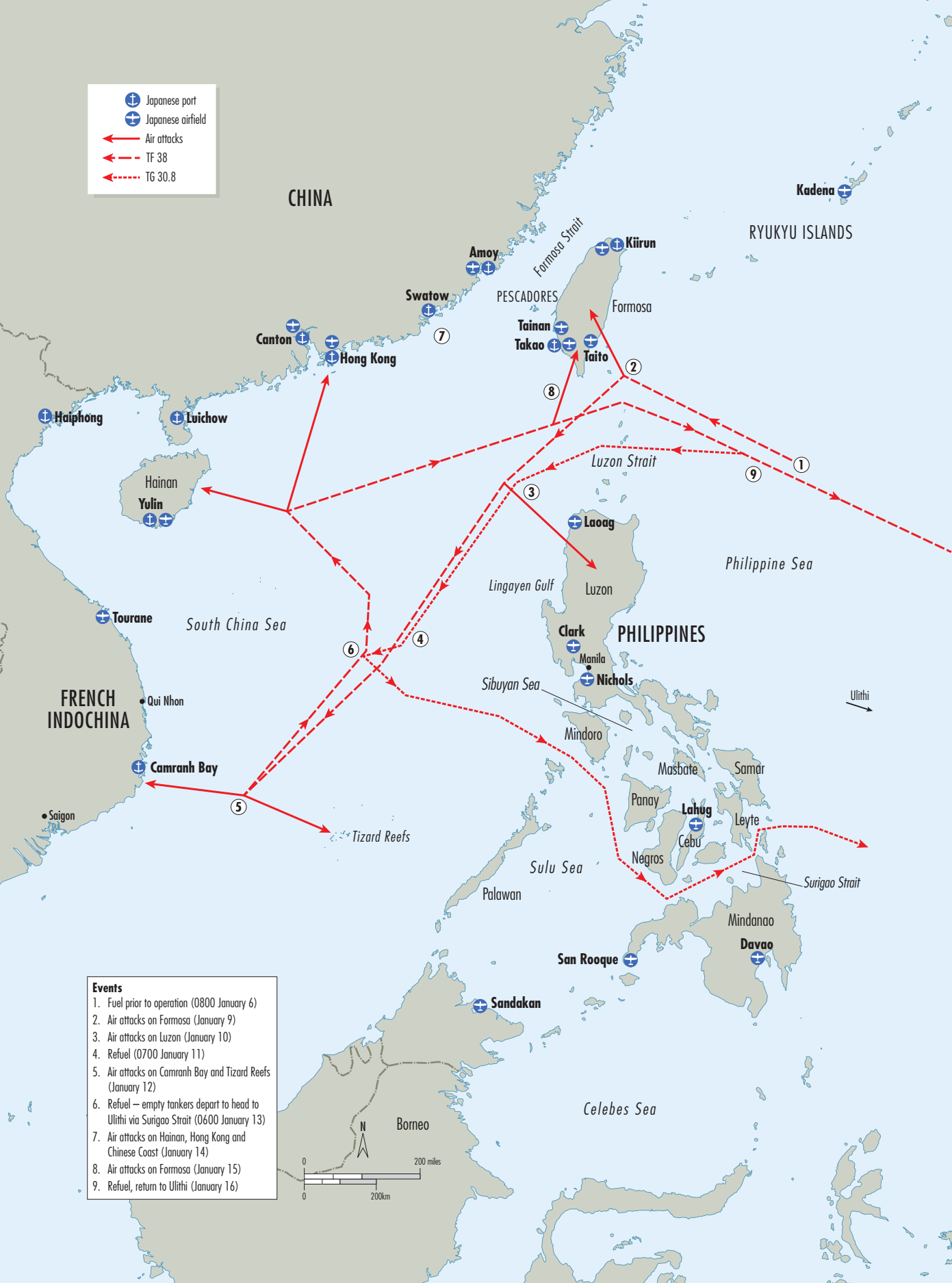
It was more than simply a Japanese-controlled body of water, however. It was Japan's most important conduit of supplies, the aorta that carried the Imperial Japanese military's lifeblood: oil, rubber, and tin from the Dutch East Indies and Southeast Asia. Much of the food that Japan used to feed its military and defense workers also crossed the South China Sea.

Cutting this supply route would "kill" Imperial Japan. Japan was dependent on what crossed the South China Sea. Without those critical supplies, its oil refineries would run dry, its munitions factories would slow, and its sclerotic domestic transportation infrastructure would face even greater stress. US submarines patrolling those waters had already taken a toll on the ships carrying strategic goods. As 1944 ended, losses to submarines had hurt Japan, but not yet crippled it. Submarines had not stopped the flow of cargo; it would take aircraft and surface warships to do that, especially aircraft.

For three years, the South China Sea had been well protected, with Japan holding the islands controlling access to its waters. The southern approaches, between the Philippines and the Dutch East Indies, were a maze of narrow channels. The eastern approaches were straddled by Luzon, Formosa, and the Ryukyu Islands. So long as Japan held these, its aircraft operating from their airfields could deny passage to surface warships into the South China Sea and imperil submarines operating within its waters.

Mindoro offered some aerial access to the South China Sea, but not enough. Medium bombers operating from its airstrips could cover only part of the South China Sea. By December 1944, they had turned into ship-killers, but they could not reach far enough. The Japanese could route convoys out of reach of these aircraft.

Both sides realized the reach and power of the US Navy's Fast Carrier Force. It was dramatically demonstrated by TF38's attack on Formosa in October 1944, which included this raid on the Formosan airfield of Karenko. Japan never thought TF38 would enter the South China Sea. (USNHHC)



OPPOSITE: THE PLANNED MISSION

Once Luzon was taken, the situation would change. But Luzon landings were not scheduled until mid-January 1945, and it could then take months before enough of the island was controlled to allow airstrips to be opened and medium bombers to operate from them. Cutting the lifeline before that happened would bring the war to a close that much more quickly. Indeed, it could make the invasion of Luzon easier, speeding the US Army's advance there.

The United States had a massive fast carrier presence in the Pacific. As it gained in strength, the Fast Carrier Force had been used in increasingly aggressive ways to project airpower. This included actions against the Imperial Japanese Navy's carriers when they came out of port, as they had during the July 1944 battle of the Philippine Sea and the October 1944 battle of Leyte. Bill Halsey was now proposing to use his carriers in the most aggressive way yet: a deep raid into the South China Sea, one that would last over a week.

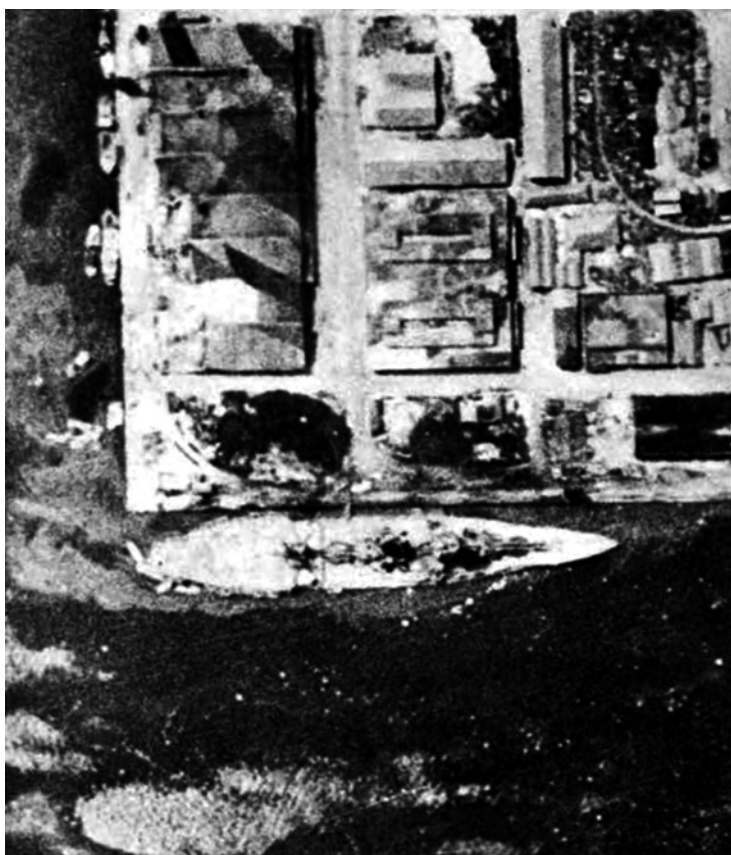
Allied objectives and plans

Even after Leyte Gulf, Japanese air and surface naval power still worried US and Allied Pacific War planners. The two Allied toeholds in the Philippines, Leyte and Mindoro, were surrounded by Japanese-held territory. Allied intelligence reported the Japanese had 280 aircraft in the Dutch East Indies, 170 in French Indochina, Siam, and Burma, and 500 in China, arranged in a semicircle around the two Allied-held Philippine islands.

The Imperial Japanese Navy still seemed formidable, with three battleships in Japan, and two more, *Ise* and *Hyuga*, believed to be in Camranh Bay. In December 1944, a destroyer task force stationed at Camranh Bay, commanded by Rear Admiral Kimura Masatomi,

Protecting the Lingayen Gulf landings was TF38's primary mission in January 1945 and one of two main objectives during its South China Sea incursion. This image shows Yellow Beach at Lingayen, crowded with supplies shortly after the landing. (AC)





Battleships *Ise* and *Hyuga* provided the second motivation for the carrier sweep. They were believed to be at Camranh Bay, having been spotted there earlier in December. This is an aerial reconnaissance photo of an Ise-class battleship. Its flight deck aft can be seen, as can its four remaining twin 12in. turrets. (AC)

point. Its objective had been the reduction of Japanese airpower prior to the landings at Leyte, and it had been successful despite the torpedoing of two US Navy cruisers. Halsey used the cruisers to aid his goal of destroying Japanese airpower. As CRIPDIV (Cripple Division) 1, the slow-moving torpedoed light cruiser *Houston* and heavy cruiser *Canberra* lured the Japanese to launch further air attacks. The Japanese aircraft were then destroyed by superior US carrier aircraft.

Halsey felt a sweep through the South China Sea could serve the same purpose. He could destroy aircraft on islands within reach of Luzon with airstrikes preceding the landings at Lingayen Gulf. By remaining in the South China Sea after the landings, he could make additional airstrikes against the Japanese airfields ringing the South China Sea. This would eliminate reinforcements from being staged to Luzon through those airfields from other parts of the Japanese Empire, especially Japan and China's interior. Those missed by TF38 air raids would be occupied fighting TF38 itself, unable to intervene at Lingayen Gulf.

The destruction of Japanese aerial forces was not Halsey's only objective. The shipping in the South China Sea was also an attractive target. The petroleum, rubber and food and tin headed to Japan from Southeast Asia and the Dutch East Indies passed through the South China Sea in numerous tankers and freighters. There were always scores of these vessels in these waters, and they were easy meat for carrier aircraft. Allied intelligence believed the battleships *Ise* and *Hyuga* were operating out of Camranh Bay in French Indochina; these warships were equally attractive targets, highly vulnerable to US Navy aircraft.

This was envisioned as more than a quick hit-and-run raid. It was to be a week-long rampage within the South China Sea, hitting targets across its shores. Indochina, China, and Formosa were going to be hit. It was to be a concerted campaign to clear the South China

crossed the South China Sea to launch a Boxing Day bombardment of the Mindoro beachhead. That was just a destroyer raid, but Lingayen Gulf was significantly closer to Camranh Bay and Allied planners had nightmares about a similar attempt against the Lingayen beaches backed by two battleships.

Allied fears about Japanese capabilities were overwrought. Aircraft numbers were exaggerated, as was the readiness of the Japanese fleet. Yet having been fooled by the Japanese at Pearl Harbor, war planners were determined not to let that happen again.

The concept of the South China Sea raid came from Halsey, who viewed it as an opportunity to once again demonstrate what aggressive use of carrier airpower could do. He had preceded the landings at Leyte with a carrier raid on Okinawa and Formosa in October 1944. Now he was advocating a similar raid into the South China Sea in advance of the Lingayen landings.

The October attack on Formosa had been the deepest US Navy penetration into Imperial Japanese waters to that

Sea of shipping and its periphery of enemy aircraft. Halsey and his staff believed it would force the remnants of the Imperial Japanese Navy and what Japanese airpower remained to come out and challenge the US Navy's superior forces. If Japan did not, its logistics lifeline would be severed.

Not everyone was as enthusiastic as Halsey. This campaign would be far more difficult than the October attacks on Formosa and the Ryukyus. It required TF38 to enter the South China Sea, which of itself was doable, despite the limited entry points. Surprise would likely allow access; the problem would be exiting the region. Once TF38 was within the South China Sea, the Japanese would be aware of the US Navy's presence and could concentrate their forces around the exit points, challenging the task force's departure.

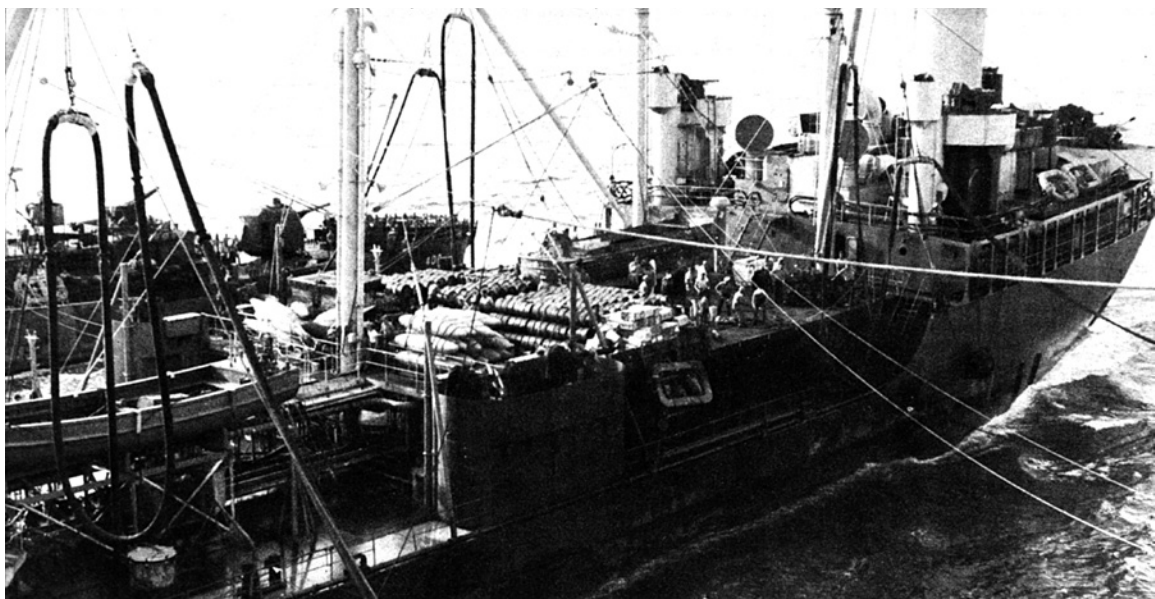
Moving the Fast Carrier Force into the South China Sea would be a riskier venture than the earlier raid. A ship crippled by torpedoes – as were USS *Houston* and USS *Canberra* in October – could likely not be towed to safety without endangering the rest of TF38. Those ships would probably have to be scuttled, and the victims of Japanese torpedoes might this time be fleet carriers instead of cruisers.

Another consideration was logistics. With TG38 planning to stay a week, it would require refueling – in fact frequent refueling, and quite possibly resupply of bombs, torpedoes, and ammunition as well. Expected aircraft wastage meant carriers might need replacement aircraft too.

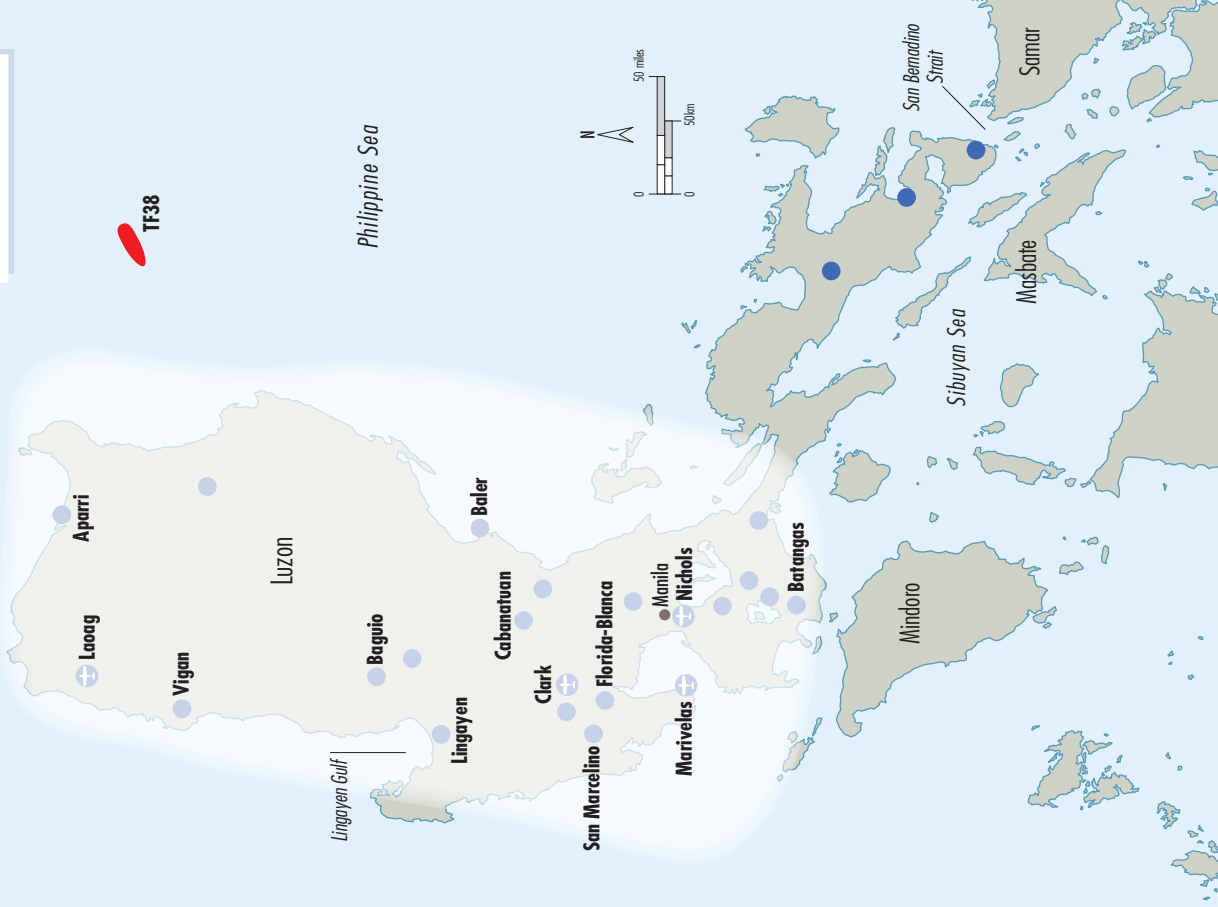
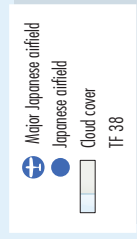
At-sea replenishment was routine for the US Navy at the end of 1944, especially refueling. Oilers had accompanied the Fast Carrier Force on every operation since the Marshall Islands landing in December 1943, and had refueled the Fast Carrier Force prior to its deep penetration to raid Truk in February 1944. However, in all previous operations the supply train had waited outside the range of ground-based enemy aircraft. If TG38 went into the South China Sea for a week, it would have to be accompanied by a large portion of its At Sea Logistics Group – TG30.8. Fleet oilers, ammunition ships, and escort carriers, none with a top speed over 20 knots, thus had to enter the South China Sea along with TF39, a sea surrounded by enemy airfields.

A successful incursion of the South China Sea by TF38 could shorten the war by at least several months. The potential to sever Japan's most important supply artery, significantly reduce its already-inadequate merchant marine, and devastate a significant portion of the

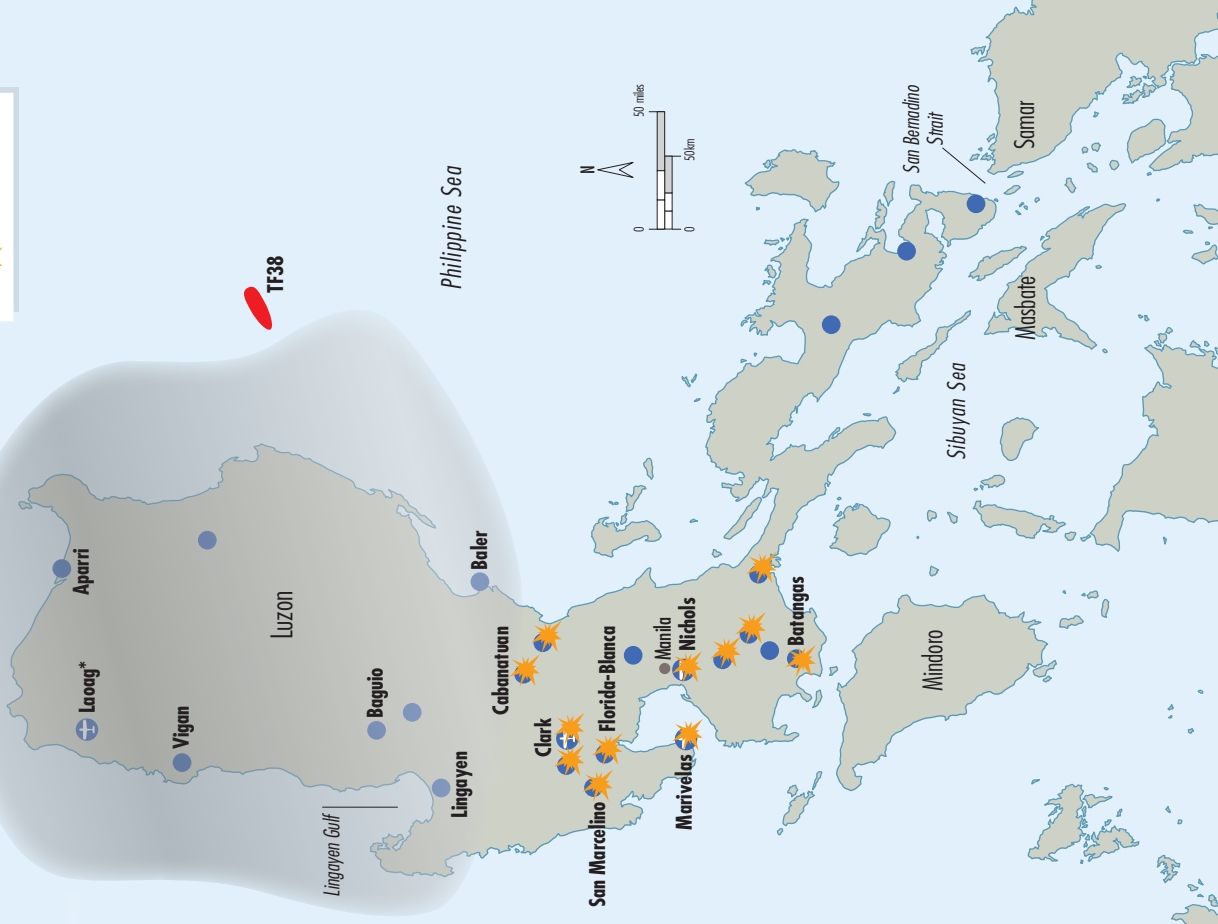
The sweep was possible only due to the US Navy's remarkable logistics, including its ability to refuel warships at sea, any time and under virtually any conditions. This fleet oiler is refueling two warships simultaneously, one on each side. (AC)



January 6



January 7



OPPOSITE: LUZON AIRSTRIKES

remaining Imperial Japanese Navy ultimately overcame objections. US Navy warships were intended to go into harm's way – it was a tradition dating to John Paul Jones and the American War of Independence.

Moreover, the campaign, if successful, would demonstrate the power of the US Navy. It would be proof that it could go anywhere within the waters of Imperial Japan; that nothing was inviolate. Japan would have to fear the appearance of US naval aviation off the coast of Japan, in the East China Sea, the Java Sea, perhaps even the Yellow Sea.

It would also demonstrate that land-based aviation was no longer invincible. If carrier aviation could successfully challenge land-based aviation it would be almost as revolutionary a change in aerial warfare as the discovery, 80 years earlier during the American Civil War, that naval warships could successfully defeat shore batteries had been to naval warfare.

Halsey's proposal was duly adopted, albeit with changes. The most important alteration was that the raid was delayed until after the Lingayen Gulf landings. TF38 was expected to spend two days after the landings throwing the Big Blue Blanket over Luzon one more time to reduce the opportunity for kamikazes to attack the vulnerable landing force during the critical opening days of the invasion. Additionally, TF38 was to precede the invasion by raiding Formosa from the Philippine Sea, a reprise of the attacks prior to the Leyte landings. Only then could the Third Fleet cut loose and enter the South China Sea.

Halsey did not mind the change. It was an opportunity to kill more Japanese. The requirement for the precursor attacks was simply rolled into the original plan. The planned operations in the South China Sea were not curtailed, only delayed until the added attacks were made. Additional attacks were also planned after departing the South China Sea.

To launch the campaign, Formosa's airfields would be attacked, eliminating any potential aerial reinforcement of Luzon. This would take place the day of the Lingayen landings. Two days of attacks on Luzon would follow. TF38 – accompanied by six oilers, six escort carriers, and several fleet tugs and ammunition ships of TG30.8 – would slip through the gap between Luzon and Formosa during the night. Any night-flying Japanese aircraft approaching the US Navy ships would be intercepted and destroyed by night fighters operating off *Enterprise* and *Independence* (the other night-operations carrier).

From there TF38 would streak across the South China Sea and launch strikes at Camranh Bay (and hopefully sink *Ise* and *Hyuga*) and the French Indochina coast from Saigon to Haiphong, as well as the Tizard Reefs (a shipping lane). The primary targets would be shipping. The carrier force would then double back and refuel before spending a day hitting targets on the west side of Formosa, the Pescadores, and China's coast between Amoy and Swatow. Doubling back again, it would strike again on the following day, concentrating on Hong Kong, Hainan, and points between.

From there the task force would move south, for a final refueling in the South China Sea. The empty tankers of TG30.8 would then head for Ulithi via the Surigao Strait. TF38 would go back to the Philippine Sea between Formosa and Luzon, and launch another set of airstrikes on Formosan airfields. They would meet with a fresh set of TG30.8 auxiliaries, including more oilers, then head north for the Ryukyu Islands, hitting the northern parts of Formosa on their way.

The airstrikes on the Ryukyu Islands would serve as cover for the attack's main objective: obtaining photographic reconnaissance for an invasion of Okinawa later that year. After that, TF38 would refuel and return to Ulithi. The entire campaign was expected to last a lunar month, 28 days.

Japanese objectives and plans

While, on paper, it appeared the US and their allies had much to fear from the Japanese forces ringing the South China Sea, reality was much different. Of the 950 aircraft in the Dutch East Indies, Burma, French Indochina, and China, most were committed to operations in their individual theaters. Aircraft in the Dutch East Indies, for example, were needed to protect oilfields and refineries in that region, while Japanese forces in China were moving against the Chinese armies. Forces in Indochina, meanwhile, were intent on helping their compatriots in Burma repel a British incursion.

There were 300 or so aircraft in Formosa in late December 1944, including kamikaze units. Formosa could send about half of its aircraft to repel landings in Lingayen Gulf or other landing sites in northern Luzon. The rest had to be reserved to defend Formosa, which was a vital part of Japan's war industry. Commanders there were concerned about air attacks from the Philippine Sea. There were another 350 combat aircraft in Japan, mostly naval. These were intended to provide air groups for the few remaining carriers, but their pilots were incapable of operating off carriers. Consequently, little help could come from there in the short term.

Similarly, there were few Japanese Navy aircraft assigned to the South China Sea. Fighters and bombers intended to attack ships were in short supply and needed elsewhere, as were long-range maritime patrol aircraft. The few aircraft available were used for antisubmarine patrols.

That left perhaps 250 aircraft remaining in the Philippines, mainly in Luzon. About two-thirds were kamikazes. Many were training aircraft formerly used in now-closed Philippine flight schools. Luzon was preparing to defend against an invasion, and these aircraft were being reserved to attack the invasion fleet.

Nor was the Imperial Navy in a position to intervene. It was down to three aircraft carriers (all without air groups), five battleships, and five heavy cruisers. Less than two dozen destroyers led by two light cruisers were available as escorts. The Navy was thus in no position to challenge the Third Fleet or even the Seventh Fleet (the latter guarding the invasion force with seven old battleships, ten cruisers, and over 359 carrier aircraft on 16 escort carriers). In early January, the Imperial Navy was split up, with the carriers, the three most powerful battleships, and one heavy cruiser in the Inland Sea. The remaining battleships and heavy cruisers were at Singapore. They were too widely separated to combine for a coordinated attack on anything,

Hong Kong harbor was Japan's most important port on the South China Sea coast. It had extensive shipbuilding and repair facilities that were used by Japan's merchant vessels and its warships. It was always crowded with shipping, as this 1945 reconnaissance photograph shows. (AC)





Within the South China Sea, the Imperial Navy was focused on antisubmarine warfare (ASW) defense. It consisted entirely of light forces: destroyers, destroyer escorts, and frigates with antisubmarine patrol craft. A few training cruisers and superannuated armored cruisers served as flagships. No Japanese submarines operated out of the South China Sea in late 1944 and early 1945: there were no Allied surface warships operating there prior to January 1945 (the primary targets for Japanese subs). Furthermore, it was too easy for Japanese submarines to be confused with US subs; it was safer to keep them out of the region.

Japan was critically short of bunker fuel for its warships and aviation gasoline for its aircraft. At the beginning of 1945, Japan was receiving only one-third of the petroleum products it had during the early months of 1942. It had too little to use for training, with fuel having to be reserved for combat and vital operations. As a result, readiness was suffering.

The Japanese were not even considering the type of counterattack on the Philippines the Allies feared. A halfhearted local defense of Luzon was as much as they planned or could manage. Retaking Mindoro, much less Leyte, was off the table. Instead, in late December, Imperial General Headquarters was drafting a new war plan. In this new plan, released on January 20, the Home Islands were to be the site of the “final decisive battle”, with the new outer defensive perimeter running from the Kurile Islands, sweeping around to the Bonin Islands, Formosa, China north of Hangchow, and Korea. Even that was to be held only as a delaying action.

In a sense, Japan had foiled one of the two major US objectives in sending TF38 into the South China Sea. The carrier sweep could not distract the Japanese from launching a counterattack against the Mindoro–Luzon line, as Japan was incapable of mounting such an offensive and uninterested in doing so.

This left TF38 plenty of opportunity to achieve its second objective. Multiple convoys crossed the South China Sea daily. Saigon, Takao, Hainan, and Hong Kong were major arrival and departure points for convoys, while Camranh Bay, Takao, and Hong Kong were naval anchorages where convoy escorts gathered. The entire South China Sea was, from the viewpoint of an attacker, a target-rich environment, second only to the Inland Sea.

From a defender’s viewpoint, it was a nightmare. Two major problems plagued Japanese commanders. The first was that there was no unified command within the South China Sea. The second was that no one was looking inward, considering a defense of the South China Sea; everyone’s attention was focused on external threats.

The South China Sea was at the junction of several commands, all with divided responsibilities. The Imperial Navy was responsible for the safety of shipping crossing the South China Sea. It concentrated its efforts on antisubmarine responsibilities and the protection of its naval bases in the region. The Japanese 14th Air Force held responsibility for Imperial Army air operation over all of China, including the coast. However, the Army did

This small war-emergency tanker was built to supplement Japan’s prewar tanker fleet. Japan never had enough tankers, which were priority targets for TF38 aircraft. (AC)



The assembly line for Ki-67 twin-engine bombers. The structural aluminum and rubber used to build the bomber, as well as most of the fuel to fly it, had to cross the South China Sea to reach Japan from the Dutch East Indies. Severing the supply line would make construction impossible. (AC)

similarly concerned himself primarily with defending locations in Formosa. Japanese forces in the Philippines were concerned almost exclusively with repelling the invasion expected at Luzon. Moreover, due to inter-service rivalry, Japanese Army and Navy commands cooperated only reluctantly. Coordination virtually took an Imperial command from the Emperor.

The result was that each command planned and fought individually, without coordination. The only exception was any pre-planned coordination. The sole example of that in early January 1945 was Philippine and Formosan cooperation to repel a US invasion of Luzon. Formosa was prepared to shift aircraft to Luzon when that happened, and also to launch kamikazes against the invasion fleet. Yet that was less an example of a coordinated defense than a coordinated attack.

Furthermore, this coordination was action against an anticipated enemy movement. No Japanese commander really considered the possibility of a US Navy carrier sweep within the South China Sea. The power and mobility of a carrier task force fell outside the experience of Japanese Army commanders. While the Imperial Navy carriers supported Army activities in China during the opening phases of the Second Sino-Japanese War, they were operating individually from bases relatively close to the coast of China. Additionally, the concentration achieved by the *Kido Butai* – formed in 1941 – was absent. The accomplishments of the *Kido Butai* at Pearl Harbor and in the Indian Ocean were an abstraction to Army commanders.

Japanese Navy officers in the South China Sea were equally blinkered. Japanese carrier commanders and naval aviators understood the potential havoc that TF38 could generate. Many had experienced it first hand at Truk, the Admiralties, the battle of the Philippine Sea, and most recently at the naval battle of Leyte. The October carrier raid on Formosa and the Big Blue Blanket thrown over Luzon during the invasion of Mindoro gave them an appreciation of the ability of the Fast Carrier Force to project power.

They also understood the logistical issues involved with the distances to be covered simply to reach Formosa from Ulithi. To move into the South China Sea required the Fast Carrier Force to bring slow and vulnerable fleet oilers with them, within reach of land-based aircraft. It was a greater risk than the *Kido Butai* had taken when it attacked Pearl Harbor – its oilers had remained far away from Hawaii.

Only Combined Fleet commander Yamamoto's insistence had convinced the high command to take that risk. Since its officers considered the Imperial Japanese Navy the boldest in the world, they assumed the US Navy would not exceed that level of risk. It was a failure of imagination that proved fatal, meaning they would fight any action within the South China Sea as a series of individual and uncoordinated battles.

not control all of coastal China between Hong Kong and Hangchow; it controlled only coastal enclaves around major port cities. The army command in Indochina was independent of that in China, whereas Formosa was ruled by a governor general – an Imperial Army officer – responsible for its defense. Similarly, the Philippines constituted a separate military district.

Each command concentrated on its own area of responsibility. The Japanese Navy defended its bases and airfields – at Takao, Mako, Hong Kong, and Camranh Bay. The 14th Air Force guarded its airfields at Hangchow, Winchow, Foochow, Amoy, Swatow, Hong Kong, Canton, Luichow, and Yulin (they protected the city and harbor at each of these locations). Imperial Army Air Forces in French Indochina safeguarded their airfields at Tourane, Qui Nhon, and Saigon. The governor general of Formosa



THE CAMPAIGN

Into the South China Sea

On December 28, 1944, the US Third Fleet was in Ulithi, resting after a busy month. It began with a reorganization of the Fast Carrier Force. The mix of bombers and fighters aboard fleet carriers had been altered from a roughly even split of fighters, dive-bombers, and torpedo bombers to one where fighters became two-thirds of the load, doing double-duty as fighter-bombers. The change was prompted by TF38's new commander, Vice Admiral John S. McCain, as part of new anti-kamikaze measures developed by his staff.

The changes had been tested – and proven effective – during the middle of the month. In support of the Mindoro landings, TF38 had thrown the Big Blue Blanket over Luzon. One of the new tactics developed involved fighter sweeps to clear the skies, followed by continuous coverage over every possible airfield from which kamikazes could operate. This round-the-clock coverage destroyed hundreds of Japanese aircraft and stopped the kamikazes cold, with little loss to TF38.

Third Fleet took more damage shortly after that action in a battle with Mother Nature. A typhoon struck Third Fleet on December 18, sinking three destroyers and damaging three others, along with one cruiser, five light and escort carriers, and four destroyer escorts. Third Fleet returned to Ulithi to recover and repair.

The respite was brief. On December 28, Nimitz visited Ulithi. Nimitz, commander of all US naval forces in the Pacific, had come to confer with Third Fleet's commander, William Halsey, who had been pushing for a massive carrier raid into the South China Sea for two months. Nimitz, concerned with preserving Third Fleet to protect Seventh Fleet (commanded by Vice Admiral Thomas Kinkaid and tasked with the Philippine landings), had been reluctant to cut Third Fleet loose to carry out Halsey's vision.

However, Nimitz now believed the time had come. He approved the raid if major Japanese units were sighted in the South China Sea, once Halsey had ensured Japanese aircraft in Formosa and Luzon did not unduly trouble Seventh Fleet's landing at Lingayen Gulf. The raid was scheduled for January 9. From Halsey's view, that condition was a bonus, allowing

The 10,000-ton tanker *Akashi Maru* is beached and ablaze off Cape St Jacques south of Saigon. It was hit and sunk by aircraft from TG38.1. (USNHHC)



"Murderer's Row": an iconic photo of five TF38 aircraft carriers at Ulithi in December 1944. The carriers in the center are (front to back): USS *Wasp* (CV-18), USS *Yorktown* (CV-10), USS *Hornet* (CV-12), USS *Hancock* (CV-19), and USS *Ticonderoga* (CV-14). (AC)

him to soften up the Japanese before entering the South China Sea. Orders were issued as the conference ended. Two day later, Third Fleet departed Ulithi.

The South China Sea: July 7, 1937, to December 29, 1944

The South China Sea is bounded by southern China to its north (which gives it its name), the Indochina peninsula to the west, the island of Borneo to the south, and the Philippines and Taiwan (or Formosa) to the east. It covers 1.4 million square miles. In the early 21st century, one-third of the world's trade crosses it. During World War II, it was Imperial Japan's most important maritime highway.

To Imperial Japan, its value lay in more than its use as a highway. Its southern periphery remains one of the world's most important sources of fossil fuels. Burma, Malaya, Sumatra, Siam, and Borneo lay atop a vast pool of petroleum, crude oil so rich it could be used as bunker fuel without refining. A lust for that oil led Japan to launch the campaigns of conquest that instigated World War II, and oil from that region was Japan's most

important source of energy during the global conflict.

The sea also contained rich fisheries, and the lands around its periphery were agricultural marvels. Formosa produced 75 percent of Japan's sugar, while the Mekong River in French Indochina was a rice bowl; so was Burma's Irrawaddy River, close at hand. All these resources could feed a hungry people, and Japan always had more people than food.

Access to the South China Sea was limited. It could be entered from the Taiwan Strait between the Chinese mainland and Formosa in the north, and the gap formed between Luzon and Formosa in the east. A maze of channels through the Philippine archipelago allowed passage to the southeast and south. To the west, the Straits of Malacca permitted passage, and to the southwest was the Karimata Strait.

These passages and straits shared something in common: all were wide enough to allow generous sea room and too deep to mine adequately. Yet the gaps were also narrow enough to allow easy monitoring of traffic in and out by patrol aircraft. All it took was airfields, and there were plenty of places suitable for them.

Japan began taking possession of the South China Sea soon after the start of the Second Sino-Japanese War in 1937, which erupted with Japan swarming out of Manchukuo in July 1937. Although victorious on the battlefield, Japan had started a war it could not finish. China was too large for the Japanese Army to occupy all of it; so long as China refused to surrender, the war continued.

China started the war unprepared, but was soon receiving weapons and munitions from sympathetic neutrals, notably the United States and Soviet Union. These flowed into Free China from unoccupied harbors along the South China Sea. Japan calculated that if it could cut off these supplies, the Chinese Army would collapse.

While they could not take all of China, the Japanese could take any part they desired. They began invading China's principal remaining ports, using naval forces to lift troops into



the Chinese rear. They captured Amoy in May 1938, gobbling up nearby Foochow a few weeks later. They then landed at Swatow in June, carving out an enclave around the port.

Canton was next, with a massive invasion in December 1938. Japan occupied a large chunk of coastal China around Canton, enveloping then-neutral Hong Kong, a British Crown Colony. This sealed off Hong Kong from Free China. It capped this off by occupying Hainan in February 1939, from where it could monitor Luichow, then a French concession in China.

These invasions failed to stop the flow of supplies to China across the South China Sea. Ships delivered them to ports in French Indochina, most notably at northern Haiphong. From there, goods were shipped by rail into Free China. Some traffic continued to flow through Luichow. While remaining neutral and still at peace, France – a major colonial power – was sympathetic to China.

Occupation of Chinese ports gave Japan a series of harbors ringing the northern half of the South China Sea, from Yulin in Hainan arcing north along the Chinese coast across the Taiwan Strait to Formosa as far south as Takao, including the Pescadores. Japan did not hold this territory deep into the Chinese interior. Even in Hainan, the island's interior was controlled by Chinese guerillas. Furthermore, Japan did not bother to occupy the entire coast, leaving great uncontrolled gaps between harbors. That did not matter, as holding the ports transformed the northern half of the sea into a Japanese lake.

Things stood at that pass for a year. Then in September 1939, war broke out in Europe, with France, Britain, and the Netherlands drawn in as belligerents. In June 1940, the Netherlands and France were overrun by Nazi Germany. While the Dutch chose to fight on, with a government in exile, France surrendered, signing a peace treaty with Germany. It effectively became a non-belligerent ally of Germany.

Following the fall of France, Japan acted to threaten its eastern colonies. In late June 1940, Japan demanded France close supply routes to China, allow Japanese inspectors into Haiphong to monitor compliance, and permit Japanese naval vessels basing rights at Luichow. France conceded to closing supply lines, but resisted occupation demands until September. That month, Japan signed the Tripartite Pact with Germany and Italy, creating a formal military alliance.

A British map of Hong Kong as it appeared after World War I. Note the extensive shallow portions of the harbor which stymied US torpedo bombers in January 1945. Much of Kao-lung (or Kowloon) Bay is filled in today. (AC)



Amoy in 1928, during a visit by the US Navy's Asiatic Fleet. Amoy became Japan's first conquest on the South China Sea during the Second Sino-Japanese War. The Japanese landed there in 1938, part of their effort to deny China resupply by sea. (USNHHHC)

In an alliance where might made right, that left France as the junior partner to Japan. Japan acted on its status. In late September, Japanese Army units, led by officers impatient over the negotiations, invaded Tonkin province, the most northeastern in French Indochina. Such a move was unauthorized, and they were ordered to withdraw by the Japanese Government. Japan issued an official apology, but took a "boys will be boys" attitude to the invasion of a sovereign and theoretically allied nation.

After this, the French agreed to allow the Japanese to station up to 6,000 troops in Tonkin, and ceded three airfields there for use by Japan. The Japanese received basing rights at Luichow too. This cut off all aid from reaching China by sea. Thereafter, it had to be flown in or transported by trucks over the primitive Burma Road connecting China with the British colony. It also expanded Japanese control over the South China Sea.

France continued to administer Indochina, despite the Japanese occupation of Tonkin. It was an *Alice in Wonderland* relationship where the French pretended to rule and the Japanese pretended they were letting the French rule. French and Japanese troops even cooperated in fighting a nationalist guerilla movement in Indochina. In July 1941, the Japanese went further: they "negotiated" a new deal with the French government in Indochina that allowed Japan to station troops throughout Indochina. It also granted Japan eight airfields, plus Camranh Bay as a naval anchorage.

The naval base and airfields effectively flanked the Philippines, allowing Japan to attack the US colony from the west as well as the north. They also offered a springboard for operations deeper in the South China Sea. Any attack on British or Dutch holdings bordering the South China Sea – including the Malay States, Brunei, Sarawak, and the Dutch East Indies – could now depart from Camranh Bay. Previously, any invasion force would have left from Takao, nearly 1,000nmi farther north. It made an invasion of these territories possible.

The US had embargoed sales of scrap iron after Japan occupied Tonkin. When Vichy France and Japan signed a Protocol Concerning Joint Defense and Joint Military Cooperation, allowing Japan to occupy Indochina, the US issued an ultimatum. It believed the threat posed

to US, British, and Dutch territories bordering the South China Sea by the expansionist Japanese from their forces in Indochina was too high. It thus demanded Japan evacuate its forces from Indochina and China and withdraw from the Axis. The US backed up this demand by freezing Japanese assets in the United States. A week later, the US imposed an embargo of petroleum sales to Japan. Britain and the Netherlands soon followed suit.

This, in Japanese eyes, made war necessary. Japan had a six-month reserve of oil when the oil embargo became total. Its economy, and more importantly its army and navy, would grind to a halt by the end of March 1942. It decided to stake everything on a war to seize the resources it was being denied by the embargo. As it had with Russia 37 years earlier, Japan began negotiations with the US as it prepared for its offensive against the United States, Britain, and the Netherlands.

By November 1941, the three nations opposing Japan diplomatically suspected something was up. British intelligence had intimations of troops heading to Camranh Bay and Saigon, while US signal intelligence was also picking up indications of Japanese troop movements – the majority of them in and around the South China Sea. On November 27, US Chief of Naval Operations Admiral Harold Stark sent the following message to the commanders of the US Pacific and Asiatic Fleets:

This dispatch is to be considered a war warning. Negotiations with Japan looking toward stabilization of the conditions in the Pacific have ceased and an aggressive move is expected with the next few days. The number and equipment of Japanese troops and the organization of the naval task forces indicates an amphibious expedition against either the Philippines, Thai, Kra Peninsula, or possibly Borneo. Execute an appropriate defensive deployment preparatory to carrying out the tasks assigned in War Plan 46 [the US Navy's war plan].

A similar message was sent by the US Army's command. Everyone expected the South China Sea to be a focus of trouble. The entire northern half was Japanese-controlled, with little known about what was occurring there. Due to that, Admiral Thomas Hart, commanding the US Asiatic Fleet, began aerial reconnaissance of the South China Sea. Between November 30 and December 4, US Navy Catalina flying boats flew patrols along the Manila–Camranh Bay line. Ominously, they spotted 21 transports and a large number of warships in Camranh Bay. It would be the last time for over three years that Allied aircraft would penetrate that deep into that part of the South China Sea.

The transports were carrying 25,000 troops to invade the Malay Peninsula and Dutch East Indies. Another force was set to invade the Philippines from Formosa. However, Japan



French Indochina's Tonkin province was occupied by Japanese troops in the summer of 1940. The move prompted the United States to embargo scrap iron and steel from being sent to Japan, a major step in drawing the US into a war with Japan. (AC)



US soldiers in the Philippines surrender to Japanese troops in March 1941. Japan's conquests during the war's first six months left the South China Sea a Japanese backwater for the next two-and-a-half years. Allied forces did not return until December 1944. (AC)

training. (Japan never had enough tankers to meet its needs, and there were refineries in the region.) Except for submarines conducting a war of attrition against Japanese shipping, no Allied warships, aircraft, or soldiers (apart from guerillas) fought in the South China Sea – or even entered it

It took the US landings at Mindoro to bring the Allies back into the South China Sea. That December 15, 1944 landing barely put a toe into the South China Sea. The invasion beaches were at the southern end of the Mindoro Strait linking the Sulu Sea to the South China Sea. Some of the support carrier aircraft ventured into the South China Sea, but Japan remained firmly in control.

did not limit its war plan to the South China Sea. Landings throughout the Central Pacific were planned, including further invasions of the Philippines from Palau. The biggest surprise was an air attack at Pearl Harbor to knock out the Pacific Fleet's battle line. The attacks all began on December 7 or 8, depending on which side of the International Date Line the targets were.

In a three-month campaign, Japan swept everything before it. By the time it ended, the Japanese owned the South China Sea. Every territory around it was controlled by Japan. Allied naval forces only briefly challenged Japanese control of the South China Sea, culminating in the loss of the Royal Navy ships *Prince of Wales* and *Repulse* on December 10. Thereafter, the Allies conceded the region to Japan and were soon chased out of every body of water surrounding the South China Sea.

From January 1942 until December 1944, the South China Sea was wholly controlled by Japan. It owned the oilfields in the south, shipping the petroleum pulled from them to Japan. The sea was now so deep within the heart of the Japanese empire that they set up flight schools next to it; it simplified transporting the fuel needed for flight

Preliminaries: December 30, 1944, to January 9, 1945

If Mindoro was a toe in the waters of the South China Sea, the Lingayen Gulf landings by US forces, scheduled for mid-January, was a dive head-first into the sea. Lingayen Gulf was well within the South China Sea, and had been the site of the main Japanese landings on Luzon in 1941. The US Navy's Seventh Fleet had to traverse the South China Sea to get the US Sixth Army to the beaches. It either had to go up the west side of Luzon from Mindoro or through the Luzon Strait to approach Lingayen Gulf from the north. Either route was a direct challenge to Japanese control of the South China Sea.

That mass of American ships had to be protected as it moved towards Lingayen Gulf, but even more so during and after the landing. When the Third Fleet sortied from Ulithi on December 30, 1944, protecting Seventh Fleet was its primary objective. It would remain the focus of the initial phase of the operation. Two days of airstrikes against Formosa would open the campaign, followed by a day hitting Luzon, a third set of strikes against Formosa, and then a return to Luzon. All of these attacks were to be made by January 9, the scheduled landing day at Lingayen.



The Fast Carrier Force departing Ulithi consisted of four fast carrier task groups. Three of the task groups – TG38.1, TG38.2, and TG38.3 – had two fleet carriers and one or two light carriers. Each was accompanied by three fast battleships, five cruisers, and anywhere from 16 to 24 destroyers. The fourth task group, TG38.5, consisted of fleet carrier *Enterprise* and light carrier *Independence*, guarded by six destroyers. It was a night-operations group. During the hours of darkness, it operated independently. When dawn came, it joined TG38.2 (the only daytime task group with one light carrier), finding shelter within its anti-aircraft screen until dusk. Then it would depart again to rule the night once more.

TF38 was accompanied by part of TG30.8, commanded by Captain Jasper T. Acuff, for logistics support. The six tankers and six escort carriers would accompany TF38 on the first leg of the voyage and on into the Sea of Japan. They would provide replacement aircraft and refill the bunkers of the fleet's thirsty ships.

It took four days for the Fast Carrier Force to reach its first launching point for a set of strikes on Formosa. Surprise was essential. To prevent detection, air patrols from Guam and Leyte swept the seas around and ahead of TF38, screening it from possible discovery by Japanese patrol aircraft or picket boats. Anything discovered was quickly destroyed. Even if these snoopers radioed a contact report, it raised no alarm with the Japanese as they were being attacked by land-based aircraft.

During these four days, TF38 conducted training exercises. While the ships were veterans, many green pilots and crewmen were aboard. Training went on during daylight hours and into the night. January 2, 1945, the day before the first scheduled attacks, was spent refueling from Acuff's oilers. The predawn hours of January 3 found TF38 at its initial launching point 140nmi east of Formosa's airfields. Surprise was total.

At this point, TF38 had split into three groups. TG38.2, commanded by Rear Admiral Gerald Bogan, accompanied by TG38.5 (under Rear Admiral Matthias Gardner), struck at southern Formosa and the Pescadores. This was the region where the Japanese concentrated most of their aircraft, to oppose the anticipated Lingayen landings. Rear Admiral Andrew Radford's TG38.1, meanwhile, was assigned northern Formosa, and TG38.3, commanded by Rear Admiral Forrest Sherman, was split between central Formosa and some long distant strikes against Okinawa and the Sakishima Gunto. Blanket tactics were the order of the day, except for the strikes at the Ryukyus.

Planning and training occupied TF38 during the first few days of the South China Sea operations. Here pilots sit in the ready room, making notes prior to a flight. (AC)



TF38 announced its arrival at Formosa with a series of strikes on Japanese airfields there. Attacks were made as far south as Takao and as far north as the Sakishima Gunto. (AC)

Formosa and the ocean between that island and the US carriers. Another set of limited morning airstrikes were launched against Formosan airfields, with virtually identical results. The Japanese again stayed on the ground. Another 85 Japanese aircraft were claimed destroyed on the ground. The weather worsened as the day progressed and the afternoon strikes were again canceled.

The bad weather prevented assessment of the two days' worth of bombing strikes. Given the natural overestimation by pilots, the actual total of 170 aircraft claimed destroyed was probably overstated. Multiple pilots sometimes claimed the same aircraft. Some aircraft claimed destroyed on the January 3 may have been attacked and "destroyed" a second time the next day, or some might have been repaired overnight.

The more likely assessment made by naval intelligence was that 100–120 aircraft were destroyed. Regardless, the strikes accomplished their purpose. When the Seventh Fleet reached Lingayen Gulf on January 9, they were unmolested by attacks from Formosa. In exchange, the strikes cost TF38 22 aircraft.

TF38 spent January 5 refueling while heading to the Philippines. Their next task was to throw the Big Blue Blanket over Luzon. They had done so three weeks earlier, covering the Mindoro landings. The foul weather had delayed that effort by one day.

Seventh Fleet and the Lingayen invasion forces had departed Leyte Gulf on January 2, heading to Lingayen Gulf via the Surigao Strait, across the Sulu Sea and through the Mindoro Strait into the South China Sea. At that point there were some 350 Japanese aircraft in Luzon; 120 were at Clark Field, the rest at Nichols or scattered at other airfields throughout Luzon. (Clark and Nichols were prewar airfields, built by the US Army, the most developed airfields in the Philippines.) Roughly two-thirds of them were kamikazes. Attacks on the fleet began on January 3, while it was entering the Sulu Sea.

At the time, TF38 was starting its attacks on Formosa. Seventh Fleet had to rely on US Army Air Force fighters and the Wildcats aboard the 18 escort carriers accompanying the invasion force. The carriers maintained a CAP of 40 fighters in the air at any one time. The Army Air Force did what it could. At times it had up to 68 aircraft covering the fleet, but they were better at attacking enemy airfields than providing cover to a moving fleet.

Murphy's Law then intervened. A storm front lay between the carriers and Formosa. The initial sweep, launched before dawn, had to fly through solid clouds and overcast. It was the first of many encounters with bad weather that would bedevil the operation and hamper flying. Some pilots were unable to reach their targets, forced back by the weather or misled by tricky navigation. Blanketing Formosa's airfields would not be possible.

Yet what fortune took with one hand she gave back with the other. The weather was so bad that the Japanese remained on the ground, their pilots unable to cope with the thick cloud. The US carrier aircraft that did find their target airfields consequently also found them filled with parked Japanese aircraft. Navy aviators claimed a bag of 85 aircraft destroyed during the morning strikes on January 3. There were no afternoon strikes; the weather was too bad and they were canceled.

The pattern repeated itself the following day, January 4. The storm front remained over

Although the Japanese threw kamikazes at Seventh Fleet throughout January 3, none scored a hit. The next day, at 1712hrs, a twin-engine Ki-45 dove out of the clouds to crash into escort carrier *Ommamney Bay*. The fleet was at this time approaching Mindoro Strait. Nearby islands shielded the attacking aircraft from radar and visual lookouts missed seeing it until it was too late. It crashed into the carrier's flight deck, one of the bombs exploded in the hangar deck, and a second penetrated to an engine room. Fires soon raged out of control. *Ommamney Bay* sank shortly after 1830hrs.

The misery continued for the Seventh Fleet throughout January 5. By then it could maintain a CAP of only 24 aircraft. Additionally, they were moving along Luzon's coast, close to Clark and Nichols fields. Army Air Force fighter support dropped off. Seventh Fleet was beyond the range of single-engine fighters out of Leyte, and the Army Air Force had been operating out of Mindoro airfield for only a few weeks. Worse, rain had shut down Mindoro's sodden runways. It was more of the rain that had been impeding TG38 in Formosa.

Some 50 kamikazes were thrown at Seventh Fleet on January 5, and 55 the next day. Ten ships were hit and damaged by kamikazes on the 5th, including two heavy cruisers and two escort carriers, although none were sunk. They were less fortunate the next day, when 13 ships were hit and the destroyer-minesweeper *Long* was sunk.

TF38 was scheduled to attack Luzon on January 6. The Army Air Force's Fifth Air Force, commanded by General George C. Kenny, was operating in the Philippines. To avoid Army Air Force and US Navy aircraft attacking each other, Fifth Air Force and TF38 had set operational boundaries for their aircraft prior to TF38's departure from Ulithi.

The events of January 5 alarmed General Douglas MacArthur, commanding US Army forces in the Pacific. Seventh Fleet would not be landing troops for three days after its January 6 arrival at Lingayen Gulf. MacArthur's soldiers were aboard those transports, vulnerable to kamikazes. Despite the risk of friendly-fire incidents, MacArthur requested that Halsey ignore the dividing line and send his aircraft across it. Halsey was only too happy to accommodate MacArthur.

TF38 completed fueling on January 5 and raced to its launching point, 120nmi southeast of Cape Engaño, where it had attacked Vice Admiral Ozawa's Mobile Force aircraft carriers on October 25–26, 1944. By dawn it was at its launching position, 90 miles due east of northern Luzon. Operations had pulled together a plan to cover the entire northern part of Luzon from Batangas to Aparri with US Navy aircraft. It was to be a repeat of the Big Blue Blanket they had dropped over Luzon to support the Mindoro landings. All three carrier groups were to be used, with TG38.5 folded into TG38.2.

The weather once again foiled US intentions. Baler and all of the airfields north of it were clouded in by heavy overcast. Visibility at Clark Field and nearby Angeles Airfield (another prewar airstrip built by the US Army) was marginal. Most of the Luzon airfields south of Clark Field, including Nichols, were obscured by clouds for most of the day.

The Navy destroyed only 32 Japanese aircraft that day – 18 of them on the ground. The US Navy lost 22 aircraft. It was an unsatisfactory exchange rate. More maddening was that the weather, despite being bad enough to keep the Navy from attacking Luzon's airfields, permitted small numbers of Japanese kamikazes to take off. They continued to attack Seventh



TF38 switched its attention to the Philippines on January 6 and 7, attempting to throw the Big Blue Blanket over airfields throughout Luzon, including this one at Baler. Protected by overcast on January 6, it was attacked on January 7. (USNHHC)



On January 9, Third Fleet returned to Formosa. Among other targets hit was shipping in Takao. The two ships shown hit and burning in this target photograph might be the freighters *Fukama Maru* and *Hisagawa Maru*, both of which were sunk at Takao that day. (USNHHHC)

on Luzon, despite deteriorating weather which made evening and post-sunset operations hazardous. TF38 lost 28 aircraft that day, but only ten in combat. The rest were operational losses, wastage due to accidents and mishaps.

Nor did TF38 strike unassisted. Eleven escort carriers from Seventh Fleet joined in the air attacks against the Japanese airfields. They flew a total of 143 sorties against airfields, devoting one-third of their total missions for the day to destroying kamikazes on the ground. The Army Air Force also joined in.

The net result was neutralization of Japanese air forces in Luzon. Reinforcement of Japanese aircraft in Luzon ceased as of January 9. Most of the reinforcements that had arrived between January 3 and 8 had come from Japanese-occupied islands in the southern Philippines. There were no further aircraft there. None had come from Formosa; that door had been slammed shut by TF38's attacks there on January 3 and 4. Within a few days of January 9, Japanese aircraft were not flying into Luzon; they were evacuating it. January 6 proved the kamikaze's high water mark. Although attacks continued after that day, the numbers were smaller and soon dropped to almost nothing.

By January 8, TF38 was again steaming northwest, preparing for another round of strikes on Formosa. Halsey wanted to ensure Formosa would not be troubling Seventh Fleet. He also hoped to strike shipping around Formosa, a task neglected earlier. Along the way, he refueled from TG30.8.

He also made one change in the lineup, exchanging two Fletcher-class destroyers between TG38.2 and TG30.8. He sent USS *Hailey* to TG30.8 and took USS *Trathen* from TG30.8, sending it TG38.2. The move puzzled *Hailey's* captain, who sent a dispatch to Halsey asking what deficiency had led to the switch from a fast carrier group escort to guarding auxiliaries. Halsey quickly replied, "Relax Com Third Fleet still loves you. Wanted to give 30.8 a radar jammer." TG30.8's need for beefed-up electronic countermeasures would soon become apparent. *Hailey* was restored to TG38.2 shortly after TF38 returned to Ulithi.

On January 9, while soldiers of the US Sixth Army were going ashore on the Lingayen beaches, TF38 was again attacking Formosa and the Ryukyus. TG38.3 again targeted the

Fleet in small numbers throughout the day. Their effectiveness even improved.

Photoreconnaissance flights after the day's missions revealed the paltry results. Analysts counted 237 operational aircraft at Japanese airfields around Luzon. Most were clustered at Clark Field and nearby airfields, dispersed and camouflaged. Halsey decided another round of airstrikes was needed to neutralize the threat.

The weather cleared significantly on January 7. The pilots had been briefed on their targets, with the photo interpreters using the new photographs to show where the camouflaged aircraft were. Thus prepared, they launched the next day. From dawn at 0600hrs until three hours after sunset at 2100hrs, TF38 aircraft flew missions over Luzon, throwing the Big Blue Blanket over Luzon's principal airfields.

The Japanese largely remained on the ground, with only four Japanese aircraft reported to have launched to challenge the Navy; all four were shot down. Another 75 Japanese aircraft were reported destroyed on the ground by TF38 aircraft. In all, TF38 flew 757 sorties against Japanese-held airfields



Ryukyus but ran into a storm front that prevented them from finding airfields at Sakishima Gunto. They had to turn back. Later in the day, they joined aircraft from TG38.2 attacking Formosa and in launching a successful strike against Miyako Jima.

TG38.1 hit the southern half of Formosa, launching two strikes from its two fleet carriers and one from each of its light carriers. There was not much there to hit. Pilots from *Hancock* reported Hieto, the airfield they attacked, was mostly filled with dummy aircraft. Instead, they destroyed two steamrollers there, used to repair the runways. TG38.1 also attacked shipping in their area. They sank two small Japanese warships – a destroyer escort and a patrol craft – and three merchant ships. The destroyer *Hamakaze* and three merchantmen were damaged.

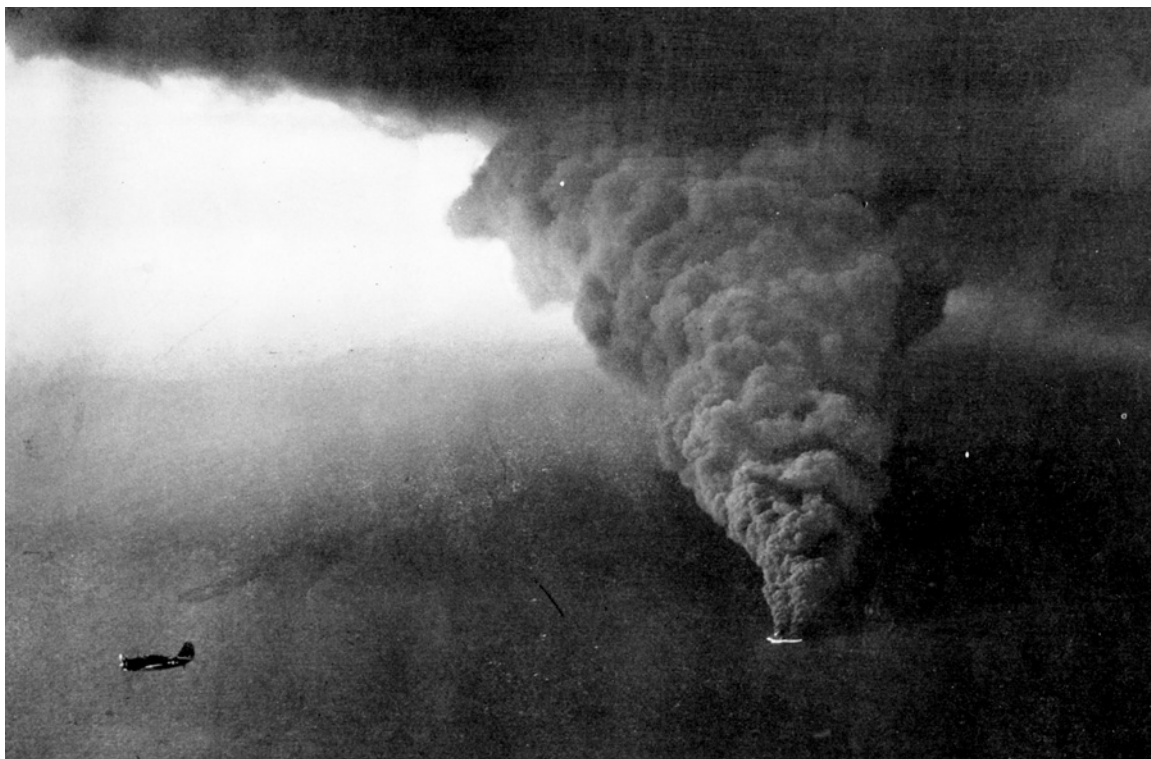
Forty-two aircraft were reported destroyed, although some were dummies. TF38 flew a total of 727 sorties and dropped 212 tons of bombs on January 9. In total, since January 3, TF38 flew 3,030 combat sorties in support of the Lingayen landings, dropped 700 tons of bombs, and lost 86 aircraft, 46 of them in combat. It was now time for the task force to enter the South China Sea.

TF38 aircraft also struck airfields throughout Formosa on January 9. At Heito, in southern Formosa, US Navy pilots discovered the fighter strip was occupied by dummy aircraft intended as bait. The flyers struck facilities at the airfield instead of the dummies. (AC)

To Indochina: January 9–12, 1945

Up to this point, nothing TF38 had done would have surprised the Japanese. TF38 had raided Formosa in October 1944, and had executed airfield blanketing in December to protect the Mindoro landings. TF38 had done a better job on those earlier visits, despite having fewer carriers attacking. That difference was largely due to more available targets in the earlier attack and better weather. You cannot attack aircraft that do not exist, and the rainy weather hobbled the attacks made by TF38.

Regardless, to Japanese eyes the raids were essentially repeating what the US Navy had done before. The Japanese were probably beginning to believe they had the measure of the US Navy. So long as the fast carriers remained in the Philippine Sea or the Pacific Ocean south of the Bonin Islands, Japan could absorb any damage caused and keep going. It might even work to Japan's benefit: the carriers could continue pounding away on these outer barriers without significantly reducing Japan's war-making capabilities. The time they spent there gave Japan more time to prepare defenses for its final homeland battles. Supplies and especially



January 12 was the first day of airstrikes in the South China Sea and the most successful day of operations. Thirty-two merchant vessels were sunk, including this one, ablaze as a Helldiver flies past it. (AC)

petroleum could continue to flow to Japan through the South China Sea, unmolested except by submarines. Even if ships could no longer use Formosan ports, they could follow the Chinese coast and remain out of reach of carrier aircraft in the Philippine Sea.

Halsey and McCain knew this. It was one reason why Halsey had advocated a South China Sea raid since November. With his direct support for the Lingayen landings complete, he was ready to execute his next set of orders. He was so ready that the orders for the movement were issued at 0900hrs on January 9, while the day's attacks on Formosa were occurring.

US naval intelligence reported the *Ise* and *Hyuga* were at Camranh Bay. That satisfied Nimitz's requirement that there be major Japanese units in the South China Sea. The two battleships were among the oldest Japan had. They had been designed before World War I and were contemporaries of the US Navy's Arkansas class. They were also the slowest battleships Japan had. Both had one-third of their main battery removed when they were converted to hermaphrodite aircraft carriers in 1942 and 1943.

Part battleship and part aircraft carrier, they did neither job well. They could carry only 24 aircraft, and these had to be floatplanes if they were to be recovered by the launching battleship. Since Japan lacked pilots capable of launching from ships, they had no aircraft aboard in January 1945. The conversion reduced their main battery to eight 356mm (12in.) guns. A new US Alaska-class large cruiser (armed with 9 12in. guns of longer range) could have probably bested *Ise* or *Hyuga* in a single-ship action. Yet the pair were still battleships and represented 40 percent of Japan's remaining battleship force. Their presence sufficed to justify Halsey's incursion into the South China Sea.

Once the airstrikes on January 9 ended, TF38 and TG30.8 set course for the South China Sea. On the evening of January 9–10, TF38 passed through the main part of the Luzon Strait, an 80nmi gap between Formosa and Itbayat Island, into the South China Sea. TG30.8 took the more southerly and narrower Balintang Channel between the Batanes and Babuyan Islands.

The night-operations carriers put an aerial umbrella over both groups of ships to prevent detection of the Third Fleet during the passage. Radar-equipped Hellcats patrolled the skies, aided by both carrier radar and Avengers serving as primitive electronic early warning aircraft. They encountered no Japanese aircraft hunting for the Americans. Fighters from *Independence* did intercept and shoot down three Japanese aircraft fleeing Luzon for Formosa; they were part of a final aerial evacuation of the Philippines, and were unlucky enough to blunder into TF38's nocturnal spider web. Third Fleet thus slipped undetected into the South China Sea.

Bad weather followed Third Fleet into the South China Sea, with high seas hindering planned refueling on January 10. Instead, fueling was completed on the following day. By sunset, Halsey and McCain were making plans for a surprise attack on the Indochina coast on January 12. The Japanese, absorbed by the Lingayen landings, remained unaware of Third Fleet's presence. An efficient CAP combined with a little luck kept snoopers away from Third Fleet during its refueling operations.

On the evening of January 11, Halsey began shuffling ships, sending heavy cruisers *Baltimore* and *Boston* with five destroyers from TG38.1 to join TG38.2. This left Vice Admiral Bogan with two battleships, two heavy, three light, and one antiaircraft cruiser, and 20 destroyers to escort his two fleet and one light carrier. This task group pushed ahead, with air cover provided by the trailing TG38.1 and TG38.3. TG30.8 fell back to the center of the South China Sea, halfway between the coasts of Luzon and Indochina. TG38.5, with the night carriers, split off to conduct a predawn reconnaissance of the Indochina coast.

Halsey planned for TG38.2 to separate during the night, with the battleships, cruisers, and a third of the destroyers in a surface combat group and the carriers and their screen in

Night action

By January 1945, two of TF38's 14 fast carriers were dedicated to night operations: fleet carrier *Enterprise* and light carrier *Independence*. These carriers provided air cover during the hours of darkness with night fighters. On the night of January 9–10, when TF38 crossed the Luzon Strait to enter the South China Sea, they patrolled the skies around both TF38 and TG30.8. Their mission was to ensure Third Fleet made the passage undetected by Japanese aircraft. Thus, *Independence* put up a curtain of fighters to intercept and shoot down any Japanese crossing the Luzon Strait between the Philippines and Formosa.

The scales were tipped in favor of the Americans. Air-search radar from TF38 ships scanned the Luzon Strait, allowing air controllers aboard the carriers to vector fighters to intercept bogeys (unidentified aircraft). The fighters were radar-equipped. They could intercept a bogey beyond visual sighting distance, identify it as a "bandit" (enemy aircraft), and attack it before its victim realized it had been spotted, much less was under attack.

Making the situation even worse for Japanese aircraft crossing the strait that night was that they were totally unaware enemy aircraft were in the vicinity. No one in the Japanese military realized TF38 was entering the South China Sea. The aircraft crossing the strait were not maritime patrol aircraft hunting enemy ships. Instead, they were part of an air evacuation of the Philippines, taking high-value personnel out of Luzon following that morning's landing at Lingayen by the US Eighth Army and Seventh Fleet. Instead of reaching safety, three of these aircraft were intercepted and shot down.

The illustration shows one such kill. The F6F-5N Hellcat is recognizable by the radome on its wing. Having made contact, it intercepted its quarry by approaching from behind and below, reducing the opportunity for the bandit to realize it was being stalked. It is a moonless night, and the dark blue F6F is invisible against the midnight blue.

The target is an L2D – a version of the Douglas DC-3, built by Showa and Nakajima, two Japanese aircraft manufacturers, under a license acquired in 1938. Production began in 1940 and it became Japan's most important transport aircraft, with nearly 500 built. The US codenamed it "The Tabby". Several were captured in Luzon during the US liberation of the island. This aircraft is unarmed, but even those which were, only carried a pair of light machine guns mounted on passenger windows.

The crew and passengers of this plane do not know they are being stalked. The pilot of the Hellcat has placed himself where the guns could not bear even if they were used. He has The Tabby just where he wants it, as a few bursts with the fighter's guns will bring it down. The attack will be so sudden the crew will not even be able to report what is happening to them. The secret of TF38's passage will remain secret.







Japanese ships scattered and beached near Cape Paderan, after being caught and attacked by aircraft from TG38.2. The burning ship may be the tanker *Ayayuki Maru*. The beached freighter is likely *Totu Maru*. (USNHHHC)

another. At dawn, the surface combat units would run in and bombard Camranh Bay as the carriers launched airstrikes on the anchorage.

At 0330hrs on January 12, four-and-a-half hours before dawn, aircraft from *Enterprise* and *Independence* made a search of the Indochina coast. They radioed in the locations of Japanese ships along the coast and enemy installations ashore. While they found plenty of targets, they did not find *Ise* and *Hyuga*. They feared the two battleships were too well camouflaged to spot. In reality, the pair had gone.

Naval intelligence had not been wrong about the elderly Japanese battleships having been in Camranh Bay. Both had arrived there on December 12, 1944. Their mission was to attack the transports heading to Mindoro in the hope of breaking up the invasion. The Japanese apparently detected the first convoy of ships headed to Mindoro, the Slow Tow Convoy which sailed on December 11. It was ill-defended against surface attack, a perfect target for the old Japanese battleships, which were ordered up from Singapore.

By the time the convoy came into striking distance, it was apparent why it left so early: to coordinate its arrival with the faster elements. These included a force of three battleships – *West Virginia*, *Colorado*, and *New Mexico* – three cruisers and six aircraft carriers. They were escort carriers, but the Japanese did not know that. It was hard to distinguish between a fleet and an escort carrier at the distances Japanese reconnaissance aircraft had to keep to maintain a reasonable chance to return a report.

The three US battleships could have beaten *Ise* and *Hyuga* even without the aid of the aircraft carriers. They had been part of Admiral Jesse Oldendorf's battle line at the battle of Surigao Strait, where they helped sink *Fuso* and *Yamashiro*, two battleships newer and more powerful than *Ise* and *Hyuga*.

Imperial Headquarters calculated the odds against a successful strike on the troop transports were too low, so they canceled the sortie. *Ise* and *Hyuga* were kept on standby at Camranh Bay for the rest of December, hoping for a chance to strike. Finally, Imperial Headquarters realized the opportunity was gone. On December 30, the day Third Fleet departed Ulithi, they ordered the battleships back to Singapore. Two days later, on New Year's Day, the pair steamed out of Camranh Bay, unaware of how close to destruction they had come.

By 0600hrs, TG38.2 was 50 miles east of Camranh Bay, with TG38.1 and TG38.3 close behind. At 0640hrs, Halsey detached the surface combat group. At 0730hrs, all three carrier groups began launching aircraft for a dawn strike. The night contingent from *Enterprise* and *Independence*, despite having been flying for the past four hours, joined in the attack before heading for their carriers. Thereafter, they refueled, rearmed, and continued strike operations for the rest of the day.

The first planes reached their targets as dawn broke, catching the Japanese by surprise. They were still unaware a US fleet was in the South China Sea; much less that one was under 50 miles from the Indochina coast. The Japanese had expected a routine day. Three convoys were moving along the Indochinese coast, with numerous other vessels, sailing individually, in pairs, or groups of three.

The first vessel attacked by TF38 was the American USS *Rock*, a submarine on lifeguard duty off the Hon Lon lighthouse. At 0500hrs, USS *English*, an Allen M. Sumner-class destroyer with TG38.2, was on picket duty when it spotted the surfaced *Rock*. Although *Rock* fired recognition flares, *English* concluded the submarine was a Japanese-controlled sailing vessel and opened fire. *Rock* promptly submerged and evaded *English*. The destroyer lost contact with its target (or assumed it had sunk) and eventually left. *Rock* remained submerged until 0651hrs, when it rigged US colors at the masthead and on deck. Forty minutes later, the first air wave passed over *Rock*; it recognized it – and its purpose – and flying directly overhead, put on a show for its lifeguard, wagging wings.

The attack was soon under way. The carrier aircraft attacked on a wide front, covering 420 miles of the Indochinese coast. They ranged as far north as Tourane and its airfield and as far south as Saigon, striking both its airfields and harbor before the day ended. Weather was mixed, with frequent showers throughout the day. That proved only a minor deterrent to the attacking aircraft. Pickings were rich.

One victim was a 15-ship convoy, Hi-86, returning to Singapore from Takao. It was discovered by TG38.3 aircraft north of Qui Nhon. Two waves of aircraft struck it in succession. When it was over, 14 of the merchant vessels were sunk, along with three of the five escorts. Sunk in the first wave by US Navy aircraft attacking the convoy were destroyer escorts *No. 23* and *No. 51*.

Also struck and sunk were seven tankers: the 10,000-ton *Kyokuun Maru*, 7,300-ton *San Luis Maru*, 7,000-ton *Eifan Maru*, 2,900-ton *Ryusho Maru*, 834-ton *Horai Maru No. 9* and *Nanryu Maru No. 2*, and 533-ton *Banshu Maru No. 63*. Seven freighters were also sunk: the 6,900-ton *Otsuyama Maru*, 5,700-ton *Yoshu Maru*, 5,400-ton *Tatsubato Maru*, 4,500-ton *Tatehe Maru*, 2,800-ton *Shoei Maru*, 1,500-ton *Daikyu Maru*, and 600-ton *Yusei Maru*.

Last to go was the cruiser *Kashii*, commissioned in 1941. By then the convoy's remnants were south of Qui Nhon, fleeing their attackers. The second wave found them there, roughly three hours later. *Kashii* was struck amidships by a torpedo and aft by two bombs dropped by a Helldiver. Those detonated its depth charge magazine. It sank, stern-first, shortly thereafter. Luck was with the remaining freighter and two escorts, which survived the onslaught and escaped.

Kashii, although new, was a training cruiser, too weak for surface combat, used mainly as an administrative flagship and to command convoy escort groups. A sister ship had been sunk off Truk when caught by the US battleship *Iowa*. Regardless, *Kashii* would be missed. The tankers were riding in ballast, returning to the oilfields, and the freighters were lightly loaded with goods for the Malay and Dutch East Indies garrisons. Japan could ill afford the loss of an additional 27,000 tons of oil transport and 27,400 tons of cargo volume.

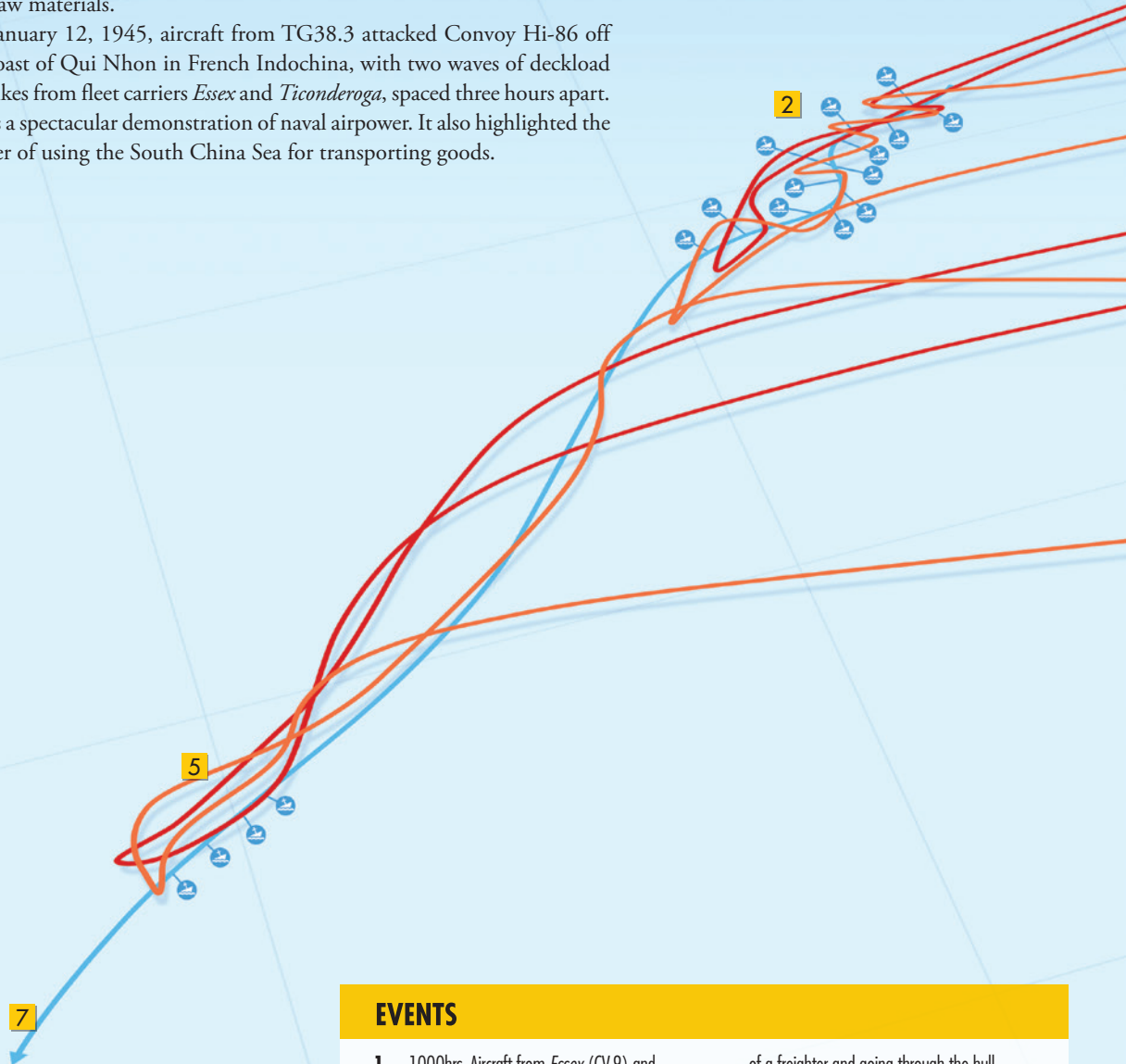


USS *English*, a destroyer assigned to TG38.2, made the first attack of the day on January 12, 1945. Unfortunately, its target was USS *Rock*, a US lifeguard submarine stationed off French Indochina to rescue downed fliers. *English*'s aim proved as good as its recognition skills: *Rock* survived uninjured. (USNHHHC)

The Destruction of Convoy Hi-86

The Hi series of convoys ran from Japan to Singapore. They were made up of high-value ships: tankers and transports. The tankers typically rode in ballast to pick up oil to return to Japan. The transports and freighters carried military supplies to support the army, returning to Japan with food and raw materials.

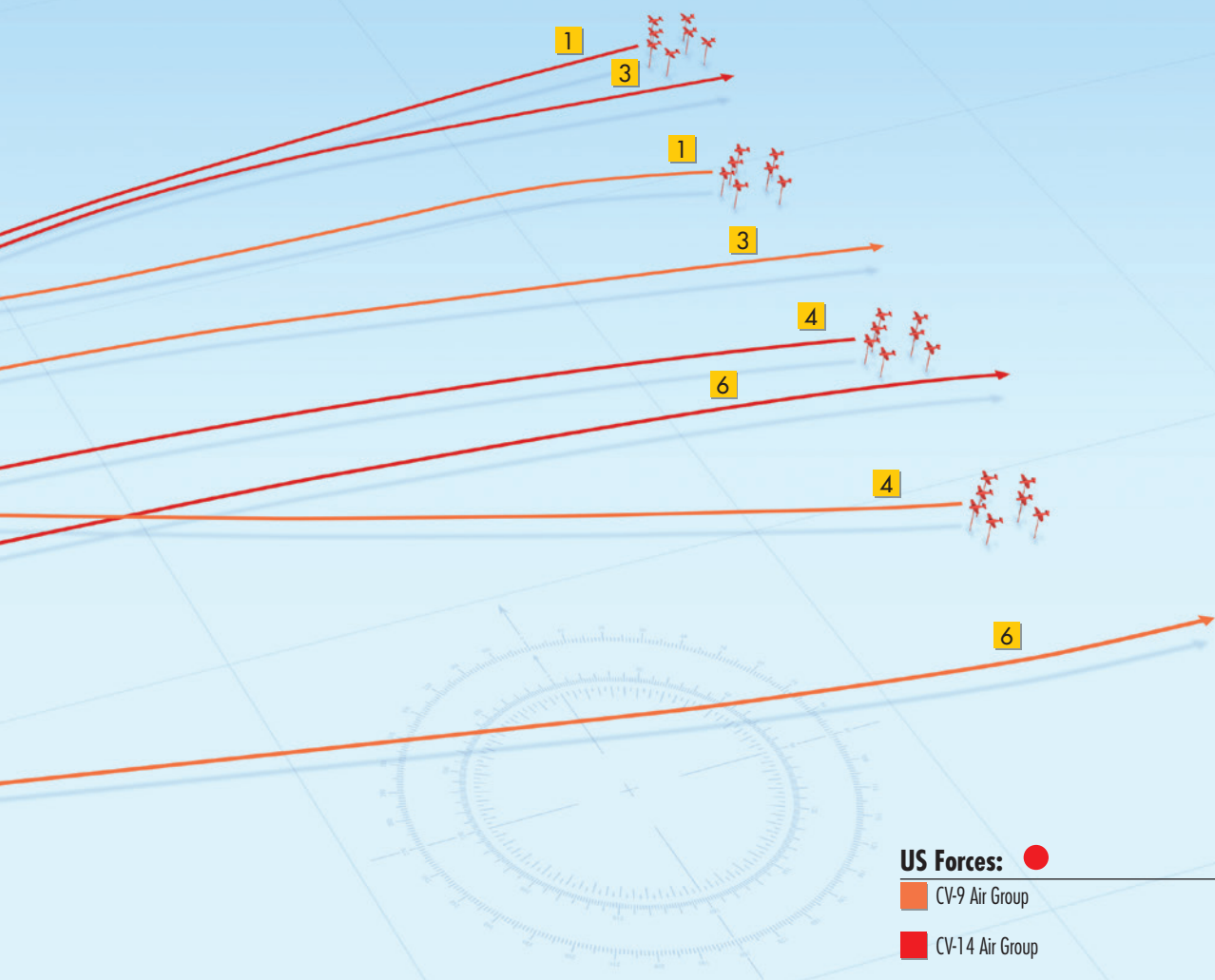
On January 12, 1945, aircraft from TG38.3 attacked Convoy Hi-86 off the coast of Qui Nhon in French Indochina, with two waves of deckload airstrikes from fleet carriers *Essex* and *Ticonderoga*, spaced three hours apart. It was a spectacular demonstration of naval airpower. It also highlighted the danger of using the South China Sea for transporting goods.



EVENTS

1. 1000hrs. Aircraft from *Essex* (CV-9) and *Ticonderoga* (CV-14) arrive within sighting distance of Convoy Hi-86. Each strike launched is made up of roughly half the aircraft on each carrier — the most that can be spotted on the flight deck at one time. Each strike consisted of 90 aircraft: 52 fighters, 23 dive-bombers, and 15 torpedo bombers. Half the fighters are armed with bombs, but even the escorts are deadly. The six .50cal guns fire bullets capable of penetrating the deck plates
2. 1015–1045hrs. Hi-86 is attacked by US Navy aircraft. Thirteen ships are sunk, including two of the destroyer escorts guarding the convoy, six tankers (displacing 29,000 tons), and five freighters.
3. 1100hrs. Having expended their ordnance, the US Navy aircraft depart the area, returning to their carriers.

of a freighter and going through the hull plates on the ship's bottom.



US Forces: ●

■ CV-9 Air Group

■ CV-14 Air Group

Japanese Forces: sunken vessels



Surviving ships:

No. 27 Destroyer Escort, 800 tons
Daito Destroyer Escort, 940 tons
Ukuru Destroyer Escort, 940 tons
 Unknown Transport

EVENTS

4. 1245hrs. Aircraft from CV-9 and CV-14 arrive to launch a second strike against Hi-86.
5. 1300–1330hrs. Hi-86 is attacked a second time by US Navy aircraft. Four more ships are sunk, most spectacularly the training cruiser *Kashii*, which sinks after its depth-charge magazine explodes. The four survivors are three elusive destroyer escorts and a very lucky transport, all of which somehow avoid getting hit.
6. 1345hrs. US Navy aircraft depart the area, returning to their carriers.
7. 1430hrs. Four surviving ships continue to Singapore. Fourteen of the convoy's 15 merchantmen have been sunk (including eight tankers), also three of its six escorting warships.

While this was the greatest loss experienced by the Japanese that day, it was far from the only one. A convoy of seven ships and four escorts was caught off Cape St Jacques (Vung Tau today) by aircraft of TG38.1. Three destroyer escorts – *Chiburi*, No. 17, and No. 19 – a 1,000-ton tank landing ship, the 10,000-ton tanker *Akashi Maru*, and the 7,500-ton troop transport *Kumgawa Maru* were either sunk or beached. Fighters in the strike strafed surviving soldiers escaping across the sand dunes.

Farther north, off Cape Padaran, TG38.2 aircraft attacked another convoy, sinking two destroyer escorts, a patrol craft, the tankers *Eiho Maru* (5,200 tons) and *Ayayuki Maru* (2,900 tons), and the 4,500-ton freighter *Totu Maru*.

At Saigon, two freighters and a tanker were sunk. The French cruiser *Lamotte-Picquet* was anchored nearby. A Duguay-Trouin-class light cruiser, it had been serving as the French Marine Nationale's flagship in the Far East when France fell. Caught at Saigon when the Japanese moved in, it had been immobilized and disarmed. What US Navy pilots saw was a warship in Japanese waters. Ignoring the French tricolor flag it flew, they attacked and sunk it. Nearby was the French surveying vessel *Octant*, which was also sunk.

Shipping all up and down the coast was struck. In total, TF38 aircraft sank 12 warships, ranging from the 6,000-ton *Kashii* to a pair of 440-ton submarine chasers. A minesweeper, seven destroyer escorts, and an armed yacht rounded off the tally. The tank landing ship, which flew an Imperial Japanese Navy flag, was the 13th Imperial Navy ship sunk that day.

Losses to Japan's merchant marine were far greater, with 32 going down. Of these, 12, of an aggregate 59,000 deadweight tons, were tankers, including three of over 10,000 tons. Fifteen others were freighters, while the remaining five were troop transports or passenger vessels; these 20 ships displaced an additional 78,000 tons. The vessels lost ranged from the 7,500-ton passenger-cargo ship *Kumgawa Maru* to the 600-ton *Yusei Maru*.

The damage went beyond that. Between two and four destroyer escorts, three vehicle landing ships, a minesweeper, five freighters, and two tankers were damaged that day by US aircraft. Of these, perhaps half were wrecked when a storm rolled through before they could be repaired.

The Japanese training cruiser *Kashii*, sinking stern first on January 12, 1945. Part of the escort for Convoy Hi-86, it was struck aft by a bomb which detonated its depth-charge magazine. Only ten of the ship's 621-man crew survived the sinking. (USNHHHC)





Nor were ships the only targets on January 12. Airstrikes were made against Japanese airfields from Saigon to Tourane, as well as on the seaplane base at Camranh Bay. Twenty floatplanes were destroyed at Camranh Bay and 77 aircraft on the ground at airfields throughout Indochina. Japanese air opposition was light. Perhaps 40 Japanese aircraft were able to get off the ground that day, of which 15 were shot down.

In all, TF38 flew 1,465 sorties on this day with the 850 aircraft available for use on the Fast Carrier Force's carriers. Of these, 481 were CAP flights while 984 were attack missions, sweeps and strikes over French Indochina and offshore. The casualty bill was low. Twenty-three aircraft were lost, but most of the aircrew were recovered, some by the faithful *Rock*, waiting offshore. The majority of aircrew shot down over Indochina were rescued by friendly locals and spirited to Free China by anti-Japanese and anti-Vichy guerilla groups.

Although the pilots of TF38 undeniably had a successful day on January 12, the surface strike force had no major Japanese warships to target in Camranh Bay. Indeed, *Kashii* was likely the largest warship within 500 miles of TF38. Due to the absence of targets, the surface strike force was recalled and rejoined TG38.2. Their participation for the rest of the day was limited to watching US carrier aircraft take off and land on the task group's carriers. It was a disappointment to those who had been hoping for a fight with *Ise* and *Hyuga*.




Three minutes after sunset, at 1931hrs, TF38, its day's work accomplished, set a course of east by northeast and steamed away from the French Indochina coast.

US Navy aircraft return to USS *Hancock* after a busy day in the South China Sea. TF38 lost only 23 aircraft on January 12, around one aircraft for every two Japanese ships sunk that day. (USNHHC)

Return to Formosa: January 13–15, 1945

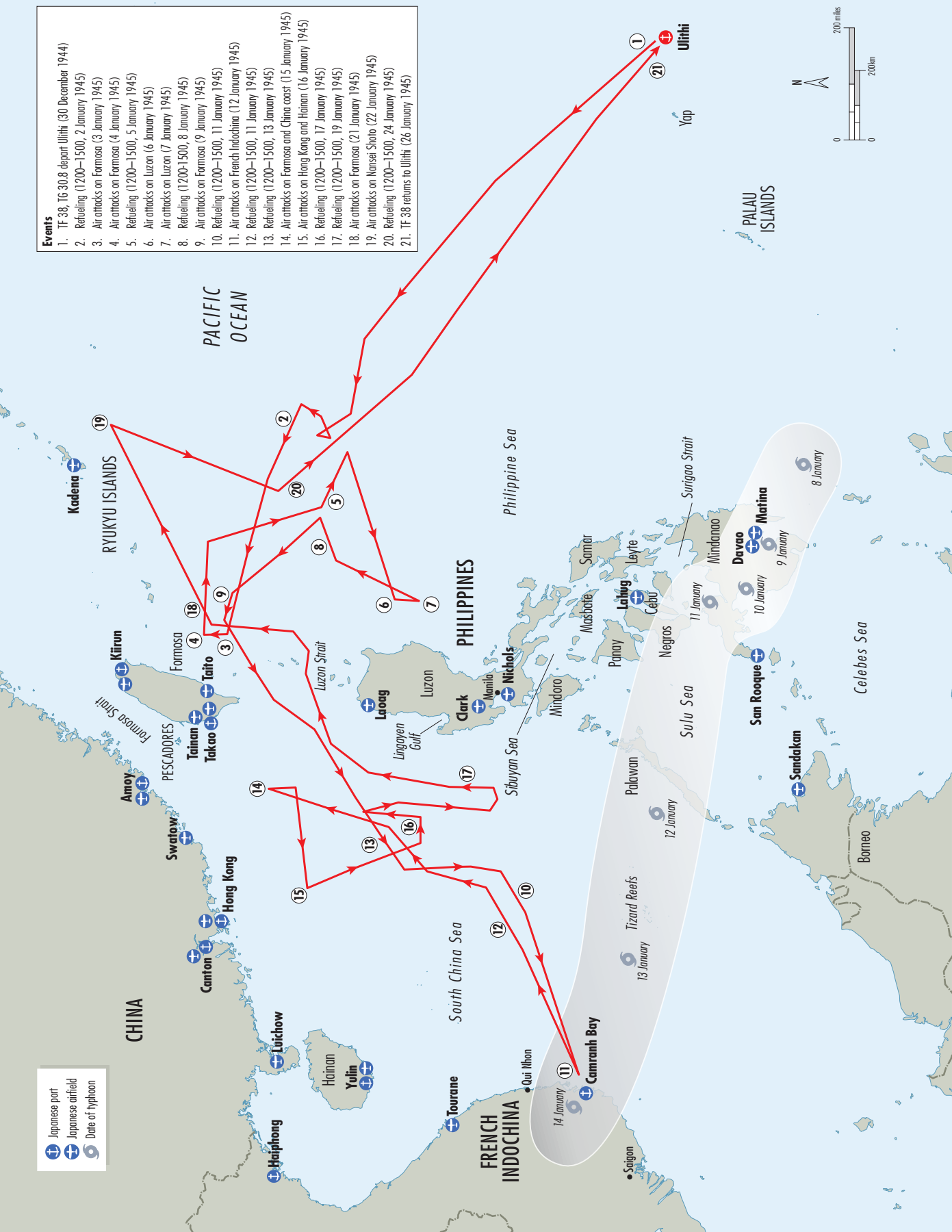
The task force's destination was a rendezvous with TG30.8, which was still circling near the spot where it had been waiting since January 11: 14 degrees north and 114 degrees east. This was north of a typhoon churning its way across the South China Sea from Mindanao to a landfall on the Indochina coast between Camranh Bay and Qui Nhon. By January 13, the tropical cyclone was just south of the planned rendezvous.

Unlike the 13th-century typhoons which scattered two Mongol fleets and saved Japan from invasion, this typhoon aided Japan's opponents. TF38's swift withdrawal, combined with the clouds and winds of the typhoon, allowed it to break contact with the Japanese. The storms lashing Indochina kept Japanese reconnaissance aircraft grounded, allowing TF38 to remain undetected during the critical refueling period.

 Japanese port
 Japanese airfield
 Date of typhoon

Events

1. TF 38, TG 30.8 depart Ulithi (30 December 1944)
2. Refueling (1200–1500, 2 January 1945)
3. Air attacks on Formosa (3 January 1945)
4. Air attacks on Formosa (4 January 1945)
5. Refueling (1200–1500, 5 January 1945)
6. Air attacks on Luzon (6 January 1945)
7. Air attacks on Luzon (7 January 1945)
8. Refueling (1200–1500, 8 January 1945)
9. Air attacks on Formosa (9 January 1945)
10. Refueling (1200–1500, 11 January 1945)
11. Air attacks on French Indochina (12 January 1945)
12. Refueling (1200–1500, 11 January 1945)
13. Refueling (1200–1500, 13 January 1945)
14. Air attacks on Formosa and China coast (15 January 1945)
15. Air attacks on Hong Kong and Hainan (16 January 1945)
16. Refueling (1200–1500, 17 January 1945)
17. Refueling (1200–1500, 19 January 1945)
18. Air attacks on Formosa (21 January 1945)
19. Air attacks on Nansai Shoto (22 January 1945)
20. Refueling (1200–1500, 24 January 1945)
21. TF 38 returns to Ulithi (26 January 1945)



OPPOSITE: THE MISSION EXECUTED

Yet the typhoon also hindered TF38. The rough seas kicked up by the storm made refueling the bigger ships difficult and replenishing the always-thirsty destroyers hazardous. The waves made it even more important for the destroyers to keep full tanks. Empty tanks caused them to ride high, decreasing stability and making them more exposed to the winds' force. Half-empty tanks were more dangerous still as their contents shifted to the low side during a roll, increasing and amplifying the roll.

Under normal circumstances, fuel could be consolidated into full tanks, with the empty bunkers ballasted with salt water. The ballasted tanks could not be refilled with fuel oil until they had been thoroughly cleaned of the corrosive salt, a time-consuming process best done in sheltered waters. Any ballasted tank would be rendered useless until this was done, most likely at Ulithi. That would dramatically reduce the range of any destroyer ballasting with salt water, an unacceptable penalty.

Despite the high seas, by the end of the day all destroyers had managed to take on enough fuel to prevent the need for ballasting. The fleet oilers and TF38 moved 200nmi northeast during January 13, seeking calmer waters.

TF38 spent most of January 13 searching the South China Sea for Imperial Japanese Navy heavy units. The all-weather night aircraft gave Third Fleet the ability to search despite the overcast, but there was simply nothing to find. All Japanese battleships, aircraft carriers, and heavy cruisers were hidden away at Singapore or in the Home Islands. None wished a hopeless clash with the Third Fleet in the South China Sea.



Heavy seas kicked up by a typhoon heading towards Indochina forced postponement of fueling planned for January 13. Its effects can be seen in this photo, taken as an Allen M. Sumner-class destroyer plows into a wave trough on that day. (USNHHC)



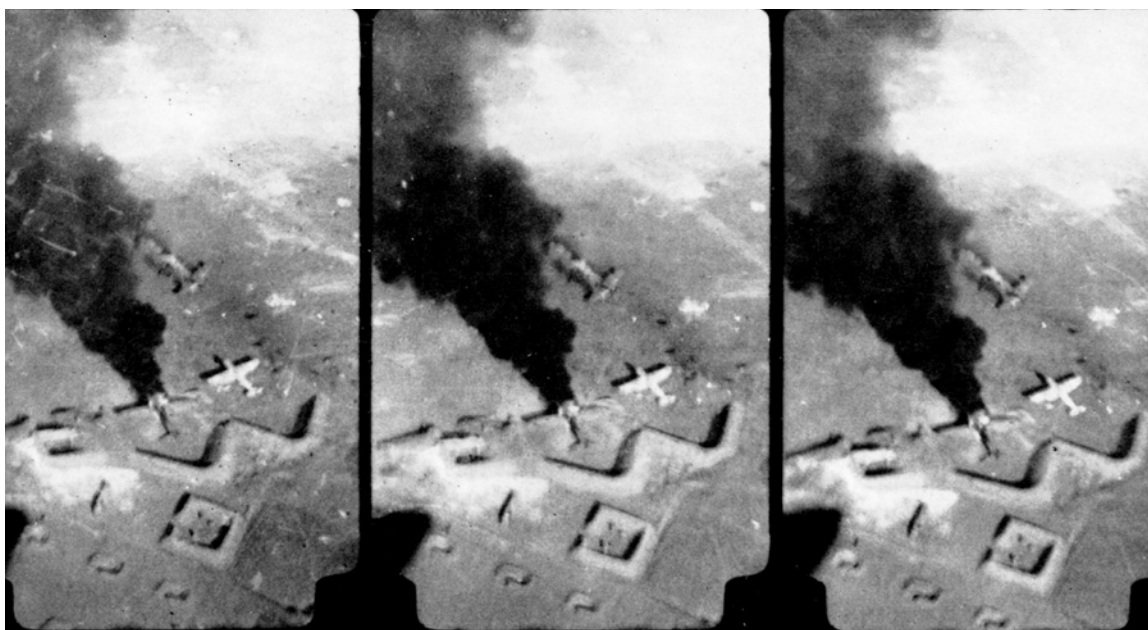
The January 15 operations against Formosa began well before dawn. Night fighters were launched at 0400hrs, patrolling the skies around TF38 and over Formosa, seeking enemy aircraft. (AC)

January 13 also brought orders from the US Navy's commanding officer, Fleet Admiral Ernest King, in Washington DC. Fretting about the safety of the forces at Lingayen, King "directed that the Third Fleet be maintained in a strategic position to intercept enemy forces approaching the Lingayen Gulf area from either the north or south." Nimitz relayed the directive to Halsey.

Halsey interpreted his orders in the most aggressive possible way. As far as he could see, the best strategic position to intercept enemy forces approaching the Lingayen Gulf area was exactly where he was: in the middle of the South China Sea. Since he was there, he could best thwart Japanese forces from attacking Lingayen Gulf by attacking them first. Better still, Nimitz advised Halsey that if Halsey could not find more important targets, he could strike Hong Kong. That was all Halsey needed to put Hong Kong on his list.

First, however, TF38 needed to make another strike at Formosa. Halsey had hit western Formosa and the Pescadores before entering the South China Sea, but from the Philippine Sea they were distant, difficult targets. From the South China Sea he could get close to them, attacking in concentrated numbers with full bomb loads.

On January 14, refueling recommenced, all destroyers topping off their bunkers. The heavy ships, however, loaded to a minimum of 60 percent of their capacity. This partial load was necessitated because Acuff's oilers were now low on fuel themselves. Once fueling was complete, TG30.8 broke away from TF38, heading for Mindoro. The six empty fleet oilers would rendezvous with relief oilers sent from Ulithi via the Surigao Strait. Full oilers would then exchange with empty ones. Once that was done, TG30.8 returned to TF38.



Meanwhile, TF38 steamed northeast to its Formosa strike position. It slowed to 16 knots as the weather worsened, a northeast monsoon blowing which made conditions miserable for both Third and Seventh Fleets.

The weather continued getting worse. At 0300hrs, Admiral McCain recommended reversing course and postponing the attacks until February 16. Halsey, after reviewing the weather data and their position, decided it was not possible to withdraw outside attack range from where they were. He had TF38 continue northeast.

Throughout the night and despite the weather, TF38 kept sending up search planes to reconnoiter potential targets – Amoy, Swatow, Hong Kong, Hainan, and the Pescadores. The big prize would be the *Ise* and *Hyuga*. No one in TF38 had given up on finding the elusive vessels, everyone believing they were somewhere in the South China Sea. Even if they did not find the battleships, the intelligence gathered from the snooping aircraft could help craft future attacks.

Somewhere between 0600hrs and 0630hrs, TF38 reached its launching positions 170nmi west of southern Formosa. The fleet was 250nmi from the China coast. Night-fighter Hellcats from *Enterprise* had been airborne since 0400hrs, patrolling the skies over the South China Sea and Formosa, searching for enemy aircraft. At 0730hrs, the first airstrikes were launched. Unlike off Indochina, the first round of airstrikes ignored shipping. Rather, they were fighter sweeps, intended to neutralize enemy air activity. TF38 was within range of Chinese airbases for the first time in the war.

Six fighter sweeps were sent against airfields at Swatow and Amoy. In a technique first tried at Truk in February 1944, waves of fighters swept over these airfields. Any airborne enemy aircraft were engaged and eliminated. Fighters then came in at low altitude, attacking everything on the ground. Aircraft, especially those on taxiways or runways ready to take off, were the highest priority. Antiaircraft positions came next. Once those threats to subsequent attackers were dealt with, hangars, maintenance facilities, and aircraft in revetments were systematically worked over by waves of fighter-bombers and bombers following after the fighter sweeps.

It was a well-practiced exercise by January 1945. Its effectiveness had been improved by the addition of fighter-bombers and the addition of HVAR missiles, which delivered a

TF38 opened the morning with fighter sweeps attacking enemy airfields. Less than two dozen Japanese aircraft were destroyed on the ground by these attacks, largely because there were few aircraft to target at the fields hit. (AC)

5in. warhead at supersonic speed. The Navy had also added the Army Air Force-developed parafrag bombs to the mix, dropping those from torpedo and dive-bombers.

Ten fighter sweeps were flown over Formosa airfields. Attention was paid to those in southern Formosa and in the Pescadores. There were eight major airfields within 30 miles of the port of Takao, one of TF38's main objectives. Takao airfield was just east of Takao harbor, while Okayama airfield, a dozen miles north of Takao, had three intersecting paved runways. The latter was immediately west of the Okayama Aircraft Plant, an assembly plant and the most important air depot in Formosa. Tainan airfield, built in 1935 and with two concrete runways, was one of Imperial Japan's earliest and most important airbases in Formosa.

Five other lesser airfields ringed Takao in a semicircle along the shores of the South China Sea: Kato, Choshu, Heito I and Heito II, and Toshein. Since the two Heito airfields were adjacent and could be dealt with through one sweep, these eight airfields represented the targets for seven of the fighter sweep missions. Airfields at Kagi, Suirin, and Kobi on the Formosa side of the Pescadore Strait, separating the Pescadores from Formosa, were probably the targets of the other three sweeps. They were the closest airfields to the Pescadores anchorage, another target for the day.

Yet the real focus of the day was not Formosa's airfields. These had been bombed on three previous occasions, in October and twice in January. Most of the aircraft that had been in Formosa at the beginning of the month, especially in southern Formosa, had been destroyed, at least according to intelligence assessments. During the January 9 attacks, Heito was discovered to have been filled with dummy aircraft.

Fighter sweeps were conducted as a precaution, to cover the possibility that Formosa's air garrison had been reinforced. The Navy's and Halsey's real interest was Takao's harbor and naval port, with eight strikes planned against shipping in the harbors of Takao and adjacent Toshien.

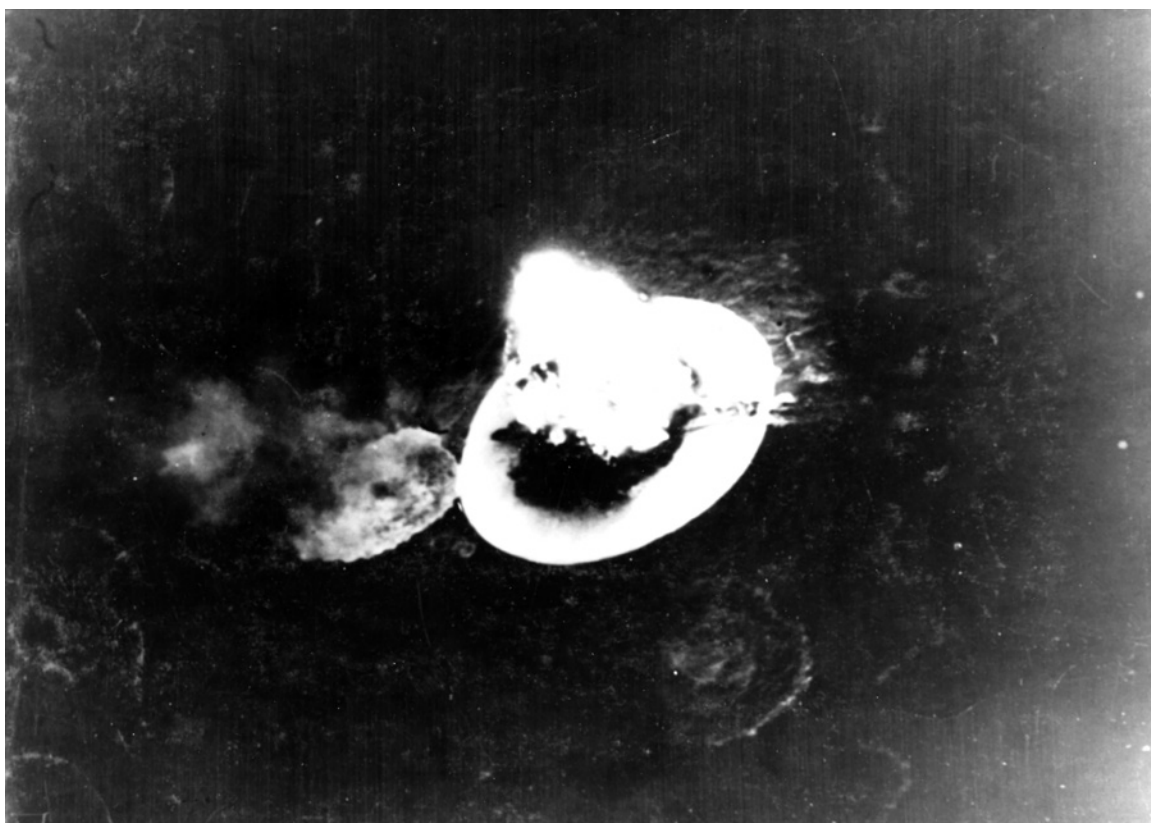
Takao, known today as Kaohsiung, was Japan's most important and developed naval base in the South China Sea. It was also the heart of Japan's naval presence in the region. It had been the major Japanese naval base there for nearly 50 years, since shortly after they liberated Formosa from China and then incorporated it into the Japanese Empire when the new Formosa Republic proved insufficiently submissive. Japan had built significant repair and supply facilities there, and ringed Takao with minefields and shore batteries.

Japan's military had also installed formidable antiaircraft batteries at Takao in the years immediately prior to World War II, anticipating air attacks from the US-held Philippines in the war's opening months. They never occurred; the 1941 Japanese assault on the Philippines moved too quickly to afford the US the luxury of striking Takao. The guns remained unused over three peaceful years: it was more trouble to move them than to let them remain.

Takao was the center of Japan's convoy and antisubmarine warfare systems in the South China Sea. It was the arrival and departure points for two sets of convoys: those going to and from the resource centers elsewhere in the South China Sea, and those carrying raw goods to Japan and returning from the Home Islands with manufactured products, including munitions. Toshien was southern Formosa's principal commercial port. Both sites were always filled with ships, both merchant vessels and warships. Potentially, the attacks could yield a larger haul than those against Camranh Bay, which was only a naval anchorage.

The weather was horrible, with low cloud ceilings over much of the attack area. Rainstorms blew through, further complicating operations. TF38 attacked Takao regardless. The attacking aircraft were pelted by almost as much antiaircraft fire as they were by heavy rain. It was the heaviest antiaircraft fire they had faced to date on the raid, and would prove to be the most they would face in the whole South China Sea operation.

The pilots persisted despite the difficulties and achieved some positive results. *Hatakaze*, a Kamikaze-class destroyer launched and commissioned in 1924, had arrived at Takao in late December after escorting a convoy from Kyushu. Still there two weeks later, it was



found and sunk by US Navy aircraft that day. *Transport No. 14*, a 1,500-ton high-speed transport, was hit by a bomb. It must have been carrying explosives, because it detonated with a massive explosion that created a concussion shock ring around the vessel. Finally, *Mirii Maru*, a 10,600-ton tanker was bombed in Toshien's harbor and damaged so badly it had to be beached to prevent it from sinking. A constructive total loss, it was never refloated. Two other minor ships were damaged in the attacks: the army cargo ship *Enoshima Maru* and auxiliary minelayer *Maroshima*.

The weather finally forced the US Navy to abandon strikes on Takao. Instead, they sent the final strikes to Mako, the Imperial Japanese Navy's old anchorage in the Pescadores. This location lacked the antiaircraft defenses of Takao, but not by much. The weather was much better though, allowing the carrier aircraft to see what they were attacking. The problem was that there really was little there, and even less that was worth attacking. Carrier aircraft caught the old Momi-class destroyer *Tsuga* in the roads just outside the naval anchorage at Mak-o-Ko and sunk it. Launched in 1920, it displaced 1,020 tons when deeply loaded and armed with three 120mm guns and four 533mm torpedoes. It was not much of a scalp.

The Japanese Navy maintained a minor weather station, listening post, and radio stations at Pratas Island, located in a small atoll roughly 170nmi southeast of Hong Kong and 170nmi southwest of Takao. The atoll was a notorious navigation hazard. Pratas Island was the largest island in the small circular reef enclosing a lagoon. *Enterprise* sent eight radar-equipped aircraft to bomb Pratas. While the base was minor, it could have located Third Fleet when it passed near while traveling to its position for the strike on Hong Kong. The attack seems to have prompted abandonment of the station. It was eventually raided by a landing party from the submarine USS *Bluegill* on May 29, 1945. The weather station, a radio tower, and several buildings were still there, but the garrison had gone.

Takao and adjacent Toshein were a focus of the January 15 attacks on Formosa. Four ships were sunk. One, *Transport No. 14*, must have been loaded with explosives. It blew up with enough force to create a concussion ring visible in the water around it. (USNHC)

of attention was the Chinese coast. It had yet to be visited, except for the six fighter sweeps conducted against airfields on the Chinese side of the Formosa Strait.

At 1644hrs on January 15, TF38 called it a day, concluding the attacks on Formosa and the northern coasts of the South China Sea. The task force then set a course to the southeast, to reach the launching points for the next day's attacks on Hong Kong and the central China coast. It had been a busy but frustrating day.

Breaking China: January 16–19, 1945

Hong Kong was to be TF38's primary target on January 16. It was a familiar location to many prewar sailors in the Third Fleet, especially those, like Halsey, who had served in the Asiatic Fleet in the years between the two world wars. It was a British Crown Colony and a frequent stop for US Navy ships visiting the southern China coast during peacetime.

Like Portuguese Macao, French Luichow, the Shanghai International Settlement and (before World War I), German Tsingtao, Hong Kong was one of the European treaty ports dotting China's coast. While China technically held sovereignty in many, for all practical purposes they were bits of China run by foreign nations.

Hong Kong was the oldest, wrested from China during the First and Second Opium Wars in 1841 and 1843. It had extended farther in 1860 with the transfer of the Kowloon Peninsula to British sovereignty. It expanded still further in 1898 when Britain obtained a 99-year lease on the mainland New Territories. Under British rule, Hong Kong had evolved from a collection of impoverished fishing and farming villages to become one of the world's major commercial centers. From a largely uninhabited peninsula, it had been transformed into one of the world's greatest trading seaports and an important naval anchorage.

British rule ended in December 1941, when Japan scooped Hong Kong up to complete its collection of treaty ports. (Only Macau, run by neutral Portugal, remained unoccupied by Japan, although after 1943 it admitted Japanese "advisors" as an alternative to formal occupation.) Since then Hong Kong had been run for the benefit of Imperial Japan. It remained an important port, a vital link in the Japanese trade network. Like Takao, Hong Kong was well defended by antiaircraft batteries.

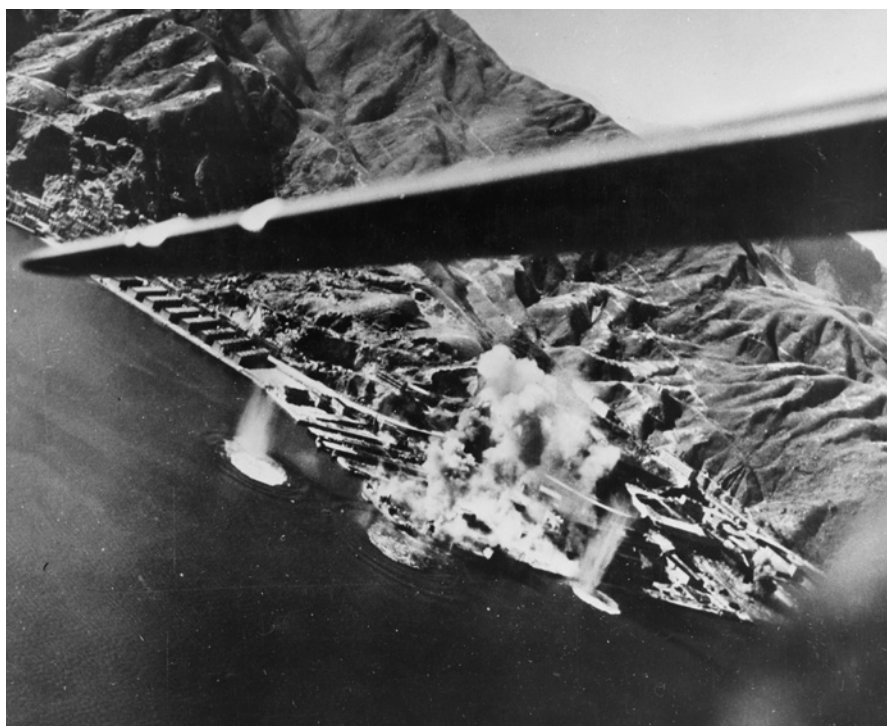
It had also been hitherto neglected by TF38, along with that stretch of the Chinese coast. On January 16, TF38 fixed that neglect. During the night of January 15/16, TF38 had slid west by southwest some 215nmi to reach the new launch position. At 0732hrs, it was launching its first strikes against the Chinese coast.

The weather remained bad and bedeviled aircraft sent against Hong Kong. The attackers found Hong Kong harbor filled with anchored merchant vessels and firing antiaircraft guns. This troubled the torpedo bombers the most as they had to attack at low altitudes, exposing them to the intense antiaircraft fire.

Pilots from *Hornet* examine a target map of Hong Kong prior to the day's mission on January 16. The Chinese shoulder patches and the pistols and combat knives worn by these pilots were carried in case they were shot down. The patch identified them as allies to local Chinese, while the weapons were to be used in combat. (USNHC)



US Navy aircraft attack the Taikoo Dockyard on Hong Kong Island on January 16. This was the most important repair facility in Hong Kong, TF38 mission planners making it a priority target. (USNHHHC)



To compound their misery, many of the torpedoes burrowed into the harbor bottom when dropped. Upon striking the water after being dropped, momentum often carried torpedoes as deep as 50ft, over 8 fathoms. Their steering system would then guide them back up to their preset depth. Most of the areas where ships were anchored in Hong Kong had depths of just 3–6 fathoms. The torpedoes dropped in those waters struck the bottom before they began to rise, and their engines then drove them deeper into the mud at 30 knots.

It must have been an extremely frustrating moment for a torpedo-bomber pilot. Opportunities to drop torpedoes were rare, and the Avengers were mostly used against land targets. Finally, these pilots had a chance to use their training. Their targets were anchored, making a miss almost impossible, despite the antiaircraft fire. They were worthwhile targets, too, as Hong Kong was filled with dozens of ships, many of which displaced 10,000 tons or more. It was the opportunity of a career – thrown away when your torpedo bottomed out.

Fortunately, fighter-bombers and dive-bombers also participated in the strike, and they were far more successful. By the end of the day, TF38 claimed five ships sunk for a total of 13,000 tons, plus a further 75,000 tons – perhaps another 15–20 ships – damaged. None of the five claimed sunk at Hong Kong appeared in the postwar JANAC (Joint Army–Navy Assessment Committee) report. Either it was a case of overeager pilots, or the ships “sunk” were actually beached and later repaired.

The strike against Hong Kong was not a total write-off. While heading to attack Hong Kong, TF38 aircraft found convoy Hi-87 50nmi south of Hong Kong. It had been steaming from Moji in Kyushu to Singapore, and was only passing by Hong Kong. The aircraft tore it apart, sinking five of its ships and damaging six more. Three tankers and two freighters went to the bottom. Of these, three displaced over 10,000 tons: the transport *Dosei Maru* (10,900 tons) and tankers *Matsushima Maru* (10,500 tons) and *Tenei Maru* (10,200 tons). Also sunk were the 6,000-ton tanker *Sanko Maru* and the 1,000-ton freighter *Anri Go No. 2*. The list of ships damaged included the 17,000-ton fleet oiler *Kamoi*, fast transport *T.108* (probably 1,500 tons), Momi-class destroyer *Hasu*, 955-ton destroyer escorts *Shinnan* and

Nomi, and coast defense vessel *No.60. Kamo* was badly damaged, limping to Hong Kong for repairs, where it was sunk during a later airstrike in April 1945.

Aircraft from the three carrier task groups ranged the Chinese coast from Swatow in the north to the Luichow Peninsula and Hainan Island in the south. In the north, US Navy aircraft found the 834-ton motor tanker *Nanryu Maru No. 6* and damaged it so badly that it capsized and sank off Amoy four days later, on January 20. Off Yulin, Hainan's biggest port, they caught and sank the 10,000-ton tanker *Harima Maru* and damaged its escort, destroyer escort *Daito*. Finally, east of Hainan they sank the small patrol boat *No.1 Taiyo Maru*.

Fighter sweeps hit Japanese airfields over the same length of coast, but the results were disappointing with only 13 aircraft destroyed. In all it was a disappointing day. Eight Japanese ships sunk was a respectable score, especially considering that six were tankers aggregating 38,000 tons. Putting down a 10,900-ton transport and knocking a 17,000-ton oiler out of the war sweetened the result. However, the missed opportunity at Hong Kong had to hurt, especially after the disappointing results at Takao the previous day.

Antiaircraft fire and bad weather combined to create significant losses to TF38's air groups. Twenty-two were brought down, almost exclusively due to antiaircraft fire. Another 27 became operational losses for a total of 49 aircraft lost, half again the complement of one light carrier.

This third set of attacks in the South China Sea by TF38 led Japan to deploy a new tool in its efforts to contain the Third Fleet: the propaganda arm. It could not be less effective than the Imperial Japanese Army and Navy had been. Japanese news services began running bulletins about how TF38 had been driven away from Formosa by "brilliant results achieved by the Imperial Japanese Forces."

Target: Hong Kong

The Taikoo Dockyard and Engineering Company was one of Hong Kong's two biggest shipyards during World War II. Completed in 1907, it was located on the north side of Hong Kong Island in Quarry Bay. It had the capability for building large vessels: the 10,000-ton cargo Glen Line passenger-freighter *Breconshire* was completed there in 1939. The shipyard had a 787ft graving dock and four building slips. Although shipping was the main focus for TF38, the ability of Taikoo Dockyard to repair damaged ships made it a prime target when the task force attacked Hong Kong.

The attack killed two birds with one stone. The dockyard would be a magnet for ships; those under repair and awaiting repair would be tied up there, as would ships carrying shipbuilding supplies to it. Damaging the shipbuilding and repair facilities would slow repair times. The longer a damaged ship had to wait before undergoing repairs, the longer it would be before it would be carrying cargoes to fuel Imperial Japan's industries.

Aircraft from Admiral Bogan's TG38.2 attacked Hong Kong on January 16, 1945. They consisted of air groups from Essex-class fleet carriers *Lexington*, *Hancock*, and *Hornet*, along with Independence-class light carrier *Cabot*. TG38.2 had half as many SB2C Helldivers again as TG38.1 and TG38.3, and a shore installation like a dockyard was an attractive target for dive-bombers and the F6F Hellcat fighter-bombers from *Lexington*. Not all of the task group's 325 aircraft conducted attacks that day, and not all of those that did sortie attacked Hong Kong harbor or Taikoo Dockyard. Regardless, a sizable contingent struck Taikoo Dockyard and gave it a thorough going over.

This illustration captures some of the action that occurred that day, when a mix of aircraft attacked. Helldivers were sent to conduct mast-top bombing against the ships near the dockyard. They would also have been used to dive-bomb the facilities there, smashing workshop and disabling cranes, construction railroads, and machinery. They would have been assisted by Hellcats, both fighter-bombers that joined in bombing warehouses and antiaircraft positions, and fighters which would have been used to strafe the yard, concentrating on antiaircraft positions.

Avengers accompanied the attack, targeting the ships moored at or near the dockyard. It was an opportunity to use the planes for the purpose for which they had been designed. The torpedo bombers had been highly successful in that role up to this point in the campaign, but the shallow waters of Hong Kong harbor stymied their efforts on January 16. Many of their torpedoes struck the bottom after being dropped and ended stuck in the harbor's muddy floor.

It was not a one-sided fight, however. Hong Kong was filled with Japanese antiaircraft artillery, placed there to protect Hong Kong from high-level bombers from the China-based US Fourteenth Air Force. Additionally, most of the ships carried antiaircraft guns for protection against air attacks when at sea. These guns were used too. TF 38 aircrew thus faced the heaviest antiaircraft fire of the campaign.







Convoy Hi-87 was passing Hong Kong on the day of the raid. TF38 duly seized this target of opportunity, sinking five of its ships and damaging the surviving six. The 17,000-ton fleet oiler *Kamoi* was so badly damaged it had to go to Hong Kong for repairs. (AC)

Reports of TF38 made Radio Tokyo's nightly English-language broadcast. Aimed at US troops in the Pacific, it used a sultry-voiced woman, dubbed "Tokyo Rose" by her listeners. On January 16 and 17, she proclaimed that TF38 was bottled up in the South China Sea, issuing dire threats as to what Imperial Japan would do to it. She further amused TF38 sailors by declaring, "We don't know how you got in, but how the hell are you going to get out?" It probably caused even greater amusement among the sailors of TG30.8, elements of which continued to slip in and out of the South China Sea through the Surigao Strait to keep TF38 fueled.

Getting out was less of a concern on January 17 than simply getting refueled. TF38 steamed south by southeast after finishing combat operations on January 16. The weather worsened on January 17, going to near-typhoon status. Flying was dangerous and seas were rough. Nevertheless, TF38 commenced fueling at 1000hrs about 200nmi west of Lingayen Gulf. Waves made station-keeping a challenge, and refueling was still going on when night fell. TF38 and TG30.8 then reversed course, steering north at 8 knots in search of smoother water. Fueling continued into the night.

On January 17, TF38's hunt for *Ise* and *Hyuga* finally ended. Reconnaissance had spotted them in Lingga Roads off Sumatra, south of Singapore. This was 1,000nmi from Camranh Bay, which was another 750nmi from the Philippine coast. At the aged battleships' 14-knot



cruising speed, it would take them at least a week to reach either the Luzon landing beaches or the supply route stretching from Mindoro to Lingayen Gulf. It was possible they might intervene, but not likely. Upon getting this information, Nimitz signaled Admiral King in Washington with the news, copying in Halsey, MacArthur, and Kinkaid on the message. That message was plain: the two battleships were no longer a factor.

It was now time to wrap things up in the South China Sea. TF38 had been there for over a week. Having hit Indochina, Formosa, and the South China coast, the sea offered no fresh targets. The low-hanging fruit within the South China Sea had been harvested. Halsey wanted to head back to Ulithi in time to support future operations in the Central Pacific, starting with the invasion of the Bonin Islands and Iwo Jima scheduled for the third week of February. Late on January 17, Halsey radioed his intentions to Nimitz. He planned for TF38 to refuel again on January 18, depart the South China Sea by the Balintang Channel, and make one final set of attacks on Formosa before heading home.

Mother Nature rewrote these plans. The weather became so bad that winds carried away part of escort carrier *Nehenta Bay*'s flight deck. It was one of six escort carriers with TG30.8 to provide TF38 with replacement aircraft and TG30.8 with air cover (when operating independently of TG38). Despite this damage, *Nehenta Bay* continued flight operations with a truncated flight deck. But monsoon winds continued throughout January 18, making it impossible to refuel that day.

Third Fleet reversed course once more, heading south seeking better weather on the downwind side of Luzon. Fleet aerologists predicted the bad weather would continue until January 19. Given the poor weather and the inability to refuel, Halsey decided to scrap the final Formosa attack and head home. He radioed this decision to Nimitz, advising his commander that he intended to refuel on January 19 and then take TF38 through the Surigao Strait.

Japan found it impossible to find TF38 while it was in the South China Sea, much less attack it. That did not stop the Japanese propaganda machine. Newspapers in Manila, along with placards on city buses, declared the US fleet badly beaten by the Japanese. (AC)



Japan located TF38 only after it left the South China Sea. On January 21, while TF38 was attacking Formosa for a final time, Japanese kamikazes struck. *Ticonderoga* was the second ship hit, struck by a kamikaze that smashed into its flight deck, hitting the forward elevator. (AC)

Nimitz disliked this choice. Mindanao was still held by the Japanese, and to reach the Surigao Strait TF38 would have to pass close enough to Japanese-held territory to be spotted. Nimitz wanted to keep the Japanese guessing as to where Third Fleet was, especially on January 18. Seventh Fleet commander Vice Admiral Kinkaid had long been unhappy about any proposed independent sweep by Third Fleet into the South China Sea. He felt it distracted Third Fleet from what he believed should be its primary role: keeping the Japanese away from Seventh Fleet, so Seventh Fleet could concentrate on invading the Philippines. These objections had been a major reason Nimitz refused to let the raid occur on November 21, 1944.

On December 30, 1944, the day Third Fleet left Ulithi, Kinkaid had delivered his new operations plan for Seventh Fleet for activities following the Lingayen landings. With MacArthur's support, Kinkaid planned to hang on to elements lent by the Pacific Fleet to Seventh Fleet, including the prewar battleships used to provide pre-invasion shore bombardment, ships needed at Iwo Jima. He also wanted Third Fleet to continue shielding Seventh Fleet, citing MacArthur's fear that Japan might concentrate its six remaining battleships against Seventh Fleet.

On January 18, Nimitz refused to authorize Kinkaid's new plan. He doubted Japan's ability to concentrate the two dispersed battleship forces, with two off Singapore and the remaining three (one of the two Kongo-class battleships had been sunk by a submarine) in the Inland Sea. He also advised MacArthur that the best way to ensure Japan did not send its battleships against the Philippines was not static defense by Third Fleet, but aggressive offensive action that kept Japan too busy reacting to TF38 to trouble the Philippines.

Nimitz requested Halsey depart the South China Sea through the Luzon Strait, a route that made it less likely TF38 would be spotted. It would also allow a final set of strikes on Formosa and the Ryukyus, and meant if the Japanese battleships in the Inland Sea did sortie, TF38 would be between them and the Luzon–Mindoro line. Nimitz left the final decision to Halsey.

The plan sounded good to Halsey and TF38 spent January 19 steaming north, about 100 miles west of Luzon. All ships were able to refuel, topping off for the next few days' operations. By the time this finished, the TF30.8 oilers were themselves low on fuel. They broke away from TF38 and headed for Ulithi, taking the Surigao Strait. It did not matter if they were spotted. Once they were gone, TF38 set a course for the Balintang Channel, one of the passages in the Luzon Strait.

Closing actions: January 20–27, 1945

TF38 spent the predawn hours of January 20 steaming north by northeast, parallel to the coast of Luzon. At 0800hrs, it turned northeast to head to the Balintang Channel. While this southern passage through the Luzon Strait offered distance from Formosa, it was narrow, a perfect spot for a submarine ambush. A destroyer division swept through the channel ahead of the three task groups to ensure the way was clear.

A constant and aggressive air patrol was also maintained around TF38 to guard against air attack. None developed, Japanese aerial forces apparently busy conducting a final air evacuation of Luzon. They were caught by surprise by the presence of US carriers. US Navy

Kamikaze counter

Following their December 30, 1944, departure from Ulithi, Third Fleet managed to go for three weeks without its ships being attacked. Despite rampaging through the South China Sea, surrounded by Japanese-held land, neither TF38 nor TG30.8 was troubled by enemy aircraft, submarines, or warships. The Japanese just could not find the fast-moving carrier task groups, or even the slower but still highly mobile auxiliaries supporting them. TF38's luck ran out on January 21.

By then they were back in the Philippine Sea, spending a final day attacking Formosa. They had started before dawn and spent the morning working over both Formosa's airfields and the harbor at Takao. The attacks had been thorough: over 100 aircraft had been destroyed on the ground that day. Despite that, it was not thorough enough, as there proved to be holes in the Big Blue Blanket.

The Imperial Japanese Navy had sent the Niitaka unit to Formosa shortly before January 21. It was made up of volunteers from the 221st Naval Air Group, a fighter unit, and the 765th Naval Air Group, a bomber unit. Just how many aircraft left Japan is unknown. Some of the unit was likely destroyed on the ground, because only 20 were able to get airborne and attack TF38: 15 A6Ms and five D4Y3s.

At this stage of the kamikaze campaign, the pilots were still true volunteers. They were also likely to have been experienced pilots with several hundred hours of flight time, including combat hours. They were not the barely trained recruits seen during the Okinawa campaign. Given their performance that day, they were probably flyers who had volunteered for special attack missions earlier, but who had been denied permission to fly a *tokko* special attack mission due to their experience. Perhaps they had escorted earlier missions. Whatever the case, they made canny attacks, demonstrating knowledge of their aircraft's capabilities and what to expect from US Navy defenders.

The blow fell heaviest on TG38.3, the northernmost task group. Two waves struck: the first between noon and 1210hrs and a second 40 minutes later. Only three Japanese aircraft struck home, and just two ships were hit: *Langley* and *Ticonderoga*. *Ticonderoga* suffered most damage, hit once by a single kamikaze in both waves. The first, a D4Y3, crashed into the flight deck, hitting the forward elevator and going through to explode between the flight deck and the hangar deck. The second, a Zero, smashed into the island, creating a massive gasoline fire that took hours to control.

This illustration shows the instant before the first kamikaze struck. The pilot used the clouds to approach *Ticonderoga* undetected, then dove out of the sun, reaching the carrier before its antiaircraft guns could shoot him down. The D4Y3 Suisei carried a 250kg bomb, large enough to do damage but light enough not to slow down this fast bomber. Before it was all over, *Ticonderoga* would suffer 345 casualties: killed, missing, or wounded. That total included its captain, Captain Dixie Keefer, who was badly burned in fires started by the second kamikaze.





fighters found and shot down 15 aircraft evacuating essential (or well-connected) personnel from Luzon to Formosa. None came within sight of TF38 or probably even realized where the enemy aircraft had come from.

By 2200hrs, TF38 was entering the Philippine Sea. Its 11 days in the South China Sea were over. Although the US Navy presence in the South China Sea continued, TF38 never returned. It did not need to. What was left could be dealt with using Army Air Force aircraft, land-based US Navy patrol aircraft, and warships smaller than fast carriers. Yet the mission was not complete. Five days, including two more days of intense combat, remained before TG38 arrived at Ulithi.

At 0100hrs on January 21, TF38 set course for its morning launching positions for that day's attacks on Formosa. By 0630hrs, it was 120nmi east of Takao. For a change, the weather was good. There were clouds but none of the driving rain and high winds of the previous week. The clouds offered cover for aircraft, but did not impede visibility of targets such as ships.

The three task groups were spotted in a line, like the pips on the face of die, spread 12 miles apart. TG38.1 was to the south, with TG38.2 in the middle and TG38.3 to the north. All three task groups launched fighters for predawn sweeps to neutralize Formosa's airfields. Airfields throughout Formosa and in the Pescadores were visited. TG38.3 sent fighter sweeps as far north as airfields in Sakishima Gunto, the southernmost islands in the Ryukyus.

The fighter sweeps over Formosa continued all day, by the end of which 104 aircraft had been claimed destroyed on the ground. Few Japanese aircraft got into the air. Only three enemy fighters were spotted over Formosa that day: two were shot down, the third escaping without stopping any US aircraft.

Following on from the fighter sweeps were bombing runs at harbors and ports throughout Formosa and the Pescadores. Kiirun, Tainan, and Takao were the most heavily hit. TF38 flew a total of 1,164 sorties over this region and claimed ten ships were sunk that day. Postwar analysis matched that tally at Takao. The ten sunk were the 1,000-ton tank landing ship *Transport No. 101*, five tankers (the 10,500-ton *Kuroshio Maru*, 6,500-ton *Manjo Maru*, 5,100-ton *Eiho Maru* and *Shincho Maru*, and 900-ton *Hoei Maru No. 3*), two freighters (*Yamazawa Maru* and *Nichiyu Maru No 2*, both 6,900 tons), the 7,100-ton passenger-cargo *Teifu Maru*, and the fishing boat *Brunei Maru*.

Five more ships were damaged at Takao, but not sunk: the destroyers *Kashii* and *Sugi* (wartime-built Matsu-class vessels, new, but not very large or powerful), tank landing ships *Transport No. 114* and *Transport No. 143*, 1,900-ton freighter *Yulin Maru*, and 5,000-ton transport *Nikko Maru*. Additionally *Harukaze*, a Kamikaze-class destroyer launched in 1923, was damaged at Mako in the Pescadores.

Damage assessment was difficult to carry out in the shallow waters of Takao's harbor. It made it tricky to determine whether a ship sitting on the bottom was wrecked or merely damaged. *Sugi* and *Yulin Maru* were both sunk within a month at ports distant from Takao, *Nikko Maru* suffering the same fate later in 1945. Their ability to travel long distances so soon after being hit indicates their damage had been only slight. *Harukaze* was badly damaged, however, so much so it had to be towed to Sasebo Naval Yard in Japan for repairs.

The Japanese Empire got some measure of revenge for the strikes that afternoon. For the first time since the Third Fleet left Ulithi on December 30, 1944, Japanese aircraft attacked TF38. The Japanese had reinforced Formosa, sending aircraft from Japan, including more kamikaze units. Small groups of these aircraft managed to leak out from under the Big Blue Blanket of the fighter sweeps throughout the day.

It would be an all-Imperial Navy show on January 21. While the Imperial Army had joined the Imperial Navy's kamikaze offensive in November and December 1944, they ran out of units in the area, having expended them trying to stop the Lingayen invasion.



The Imperial Navy was also low on kamikazes by January 21, with only three attacks involving ten kamikazes occurring.

The first blow fell on TG38.3, shortly after noon. According to US reports, seven aircraft were involved: four kamikazes and three escorts. These were probably D4Y3s from Niitaka Unit No. 2 (named after the highest mountain on Formosa) operating out of Tainan. How they evaded both roving fighters and the CAP over the carriers is a mystery, but kamikazes only needed to get lucky once. At 1206hrs, a lone aircraft came in from the sun in a shallow dive and dropped two bombs on the forward flight deck of the light carrier *Langley*. One hit home, starting fires and tearing a 10ft by 14ft hole in the flight deck.

The fires were brought under control and a patch put on the flight deck. Within three hours of being hit, *Langley* was recovering aircraft that had been aloft when the carrier came under attack. Three men of its crew were killed and 11 wounded. The ship was back in action the next day.

Ticonderoga was less fortunate. At 1210hrs, having used the clouds to escape detection, a D4Y3 dove out of the sun and onto *Ticonderoga*. It was carrying a 250kg bomb. The aircraft smashed through the flight deck and the bomb exploded between the hangar deck and the gallery deck (where the light antiaircraft guns were mounted). The hangar was filled with aircraft armed and fueled for an airstrike. They caught fire, the hangar blaze spreading to the second and third decks.

Ticonderoga fell out of formation, seeking a course that minimized the spread of flames as its crew fought the fire. Admiral Sherman, commanding TG38.3, re-formed his ships around *Ticonderoga*, both to offer antiaircraft support and to permit other ships to assist *Ticonderoga*'s firefighting efforts. They were beginning to take effect when a second wave of kamikazes appeared over TG38.3 at 1250hrs.

This time the ships were hit by eight kamikazes with five escorts, both groups of which appear to have been Zeros. Most were intercepted by CAP, with six of the kamikazes shot down. However, two reached the task group, both choosing the burning *Ticonderoga* as their

Ticonderoga would be struck a second time, this time near its island. By late afternoon, however, all fires were out and damage control teams were conducting repairs, sweeping the deck of debris and planning repairs to the flight deck. (USNHHC)



Flagship *Hancock* was also damaged on January 21, but the damage was self-inflicted. An unexpended bomb fell off an Avenger shortly after it landed; it exploded and caused a massive fire on the flight deck around the island. (USNHHC)

target. Antiaircraft fire downed one before it could reach the carrier, but the second smashed into the carrier's island, which was engulfed in flaming aviation gasoline.

Aircraft were still on the deck for the launch that had been interrupted by the first kamikaze. Some now caught fire, adding their fuel to the flames, while others suffered damage due to the ensuing explosions. *Ticonderoga's* captain ordered the magazines to be flooded to keep them from exploding. Gallons of water from the firefighting and damage from the explosions caused a 9-degree list, complicating damage control. Yet by 1415hrs, all the fires were under control and damage control teams could begin correcting the list.

By 1800hrs, the crisis had passed. The list had been reduced to 3 degrees, all fires were out, all compartments ventilated, and steps taken to restore *Ticonderoga* to a fighting condition. But the two kamikazes had caused serious damage and heavy casualties: 143 dead or missing and 202 wounded, including *Ticonderoga's* captain, with 36 of its aircraft destroyed, one-third of those it carried.

Just as the northern task group was suffering its two attacks, the southern group, TG38.1, detected enemy aircraft approaching from the south. They were 13 aircraft that had departed from Tuguegarao airfield, a prewar US Army Air Corps base in northeast Luzon captured by Japan in 1941. Possibly the last flyable Japanese combat aircraft left in Luzon, they were spotted as they flew over the Babuyan Islands marking the southern end of the Balintang Channel. The attack was intercepted by eight fighters vectored to them from light carrier, *Cowpens*. The Hellcats shot down most of the intruders, the remainder breaking off the attack well before reaching TG38.1.

Nevertheless, TG38.1 did not escape undamaged that day. *Maddox* and *Brush*, two Sumner-class destroyers assigned to TG38.1's screen, were the "Tom Cat" picket destroyers doing delousing duty that day. They were 35nmi from their task group, serving as traffic control for the group's strike aircraft, directing the CAP fighters, and rescuing downed pilots. A bomb-carrying Zero joined one of the returning flights of carrier aircraft. One of two A6Ms sent from Taitung that day, it managed to escape detection until close enough to attack the pickets. It then dove into *Maddox*, crashing amidships, where the bomb exploded. Damage



was moderate and the fire started by the crash was quickly brought under control, but it left *Maddox* with seven dead and 33 wounded.

Although those were the day's last combat casualties, one final incident caused casualties that day in the central task group, TG38.2. At 1328hrs, an Avenger landed on fleet carrier *Hancock*, Admiral McCain's flagship. Although it made a routine landing, as it was taxiing up the deck an unexpended 500lb bomb fell out of its bomb bay and exploded. The flight deck was soon ablaze and the fire spread to the gallery and hangar decks. Damage-control parties doused the fire on the hangar deck by 1345hrs, and all fires were under control 20 minutes later. By 1510hrs, *Hancock* had completed repairs on its flight deck and was once again operational. However, 52 crewmen were dead and another 105 wounded.

Hancock was still capable of fighting; *Ticonderoga* was not. When night fell, Halsey detached *Ticonderoga*, sending it back to Ulithi escorted by two light cruisers and three destroyers. He included *Maddox* as part of the destroyer contingent, detaching the damaged destroyer as well. *Maddox* was patched up at Ulithi and back in action by mid-March, but *Ticonderoga* required a trip to the West Coast of the US for repairs and did not return until late May.

TF38's next destination was Okinawa. Launch operations were set to begin roughly 90nmi south of Okinawa and 120nmi east of Myakojima. Along the way, the night-carrier group launched a strike at Kiirun's harbor. Seven radar-equipped Avengers loaded with bombs left their carrier at 0200hrs on January 20. Kiirun was Formosa's most important northern port, a center of petroleum and coal storage.

The crews used a technique to make radar-guided night attacks which had first been tested with great success during the February 1944 raid on Truk. The Avengers were armed with four 500lb bombs, their pilots having practiced low-level approaches at night, using radar to maintain altitude and track a target. After taking off from the carrier, the Avengers rendezvoused using their running lights and Aldis signaling lamps to find each other. They flew into Kiirun as a unit, dousing all lights as they neared the port.

They made their attacks at one-minute intervals. Using radar both to determine their altitude and identify their targets, they flew in at 180 knots, maintaining mast-top height. Careful individual runs were made on a target, dropping one bomb at a time. Three Avengers were lost that night, yet the raid was worth it as in exchange the attackers found and sank *Munakata Maru*, a 10,000-ton tanker.

Flight operations against the Ryukyus began at 0615hrs, 30 minutes before dawn. The day's primary objective was photoreconnaissance: an invasion of Okinawa was scheduled

The following day, TF38 struck targets in the Ryukyu Islands. This included the airfield at Ie Shima, just north of Okinawa, which is shown under attack. (AC)





Navy night bombers at Kiirun Harbor

During the night of January 20–21, seven radar-equipped Avengers from *Enterprise's* VTN-90 attacked Kiirun, a major energy center producing electricity and distributing and storing oil and coal. The strike sank the year-old 10,000-ton tanker *Munakata Maru*.

EVENTS

- Radar night bombing had been pioneered by *Enterprise* in early 1944, being successfully demonstrated in February that year in the Hailstone raid against Truk Atoll. By January 1945, *Enterprise* bombers were old hands at the technique. It was always used against anchored targets in a harbor. The bombers on a mission took off at night, rendezvoused once all the aircraft were aloft, and flew in loose formation to the target using running lights and Aldis lamps to maintain formation. Upon reaching their destination (in this case Kiirun), the Avengers made individual runs against targets.
1. 0200hrs. Avengers enter harbor. Each Avenger is armed with four 500lb bombs. The Avenger pilots make low-level night approaches, using radar for altitude control and target tracking. Flying at 180 knots at mast-top height, they make careful, individual runs on targets, using the same altitude for each run. Through practice they know when to drop their bomb to ensure it hits the target.
 2. 0215hrs. An Avenger spots *Munakata Maru* on radar.
 3. 0220hrs. He drops the first pair of 500lb bombs on the tanker. Typically, the pilots drop one bomb per pass.
 4. 0222hrs. The pilot realizes he has missed. If the first bomb misses, he will make a second (and if necessary third and fourth) run on the target.
 5. 0227hrs. The Avenger starts a second bomb run on the tanker.
 6. 0230hrs. The Avenger drops another bomb and hits the tanker, which catches fire and eventually sinks. One 500lb bomb hit usually sinks a freighter or tanker, either by flooding the ship or due to the fires the bomb creates.
 7. 0245hrs. The Avengers exit the harbor. The technique has worked well. The only ship sunk on this raid is *Munakata Maru*, but it is probably the biggest ship in Kiirun that night. With the losses Japan has already taken, it is possibly the only worthwhile target.



Third Fleet made extensive attacks on shipping throughout the Ryukyus, including this facility at Okinawa. In all, TF38 sank eight ships in and around Okinawa on January 21. (AC)

tankers, *Nanko Maru No.2* and *Nanshin Maru No.2*, were similarly sunk near Miyako Retto. TF38 aircraft also caught and sank the patrol boat *Chitose Maru No. 6* halfway between Miyako Retto and Okinawa.

All of these were small vessels, hardly worth making an effort to sink, but since TF38 aircraft were there and the ships were there, it really took no effort and relieved the tedium of endless patrolling with no reward. In all, 682 sorties were flown on January 22, including 47 photoreconnaissance missions. No TF38 ships were attacked, none was damaged, and there were no combat losses of aircraft. It might as well have been a training exercise with live ammunition and real targets. Roughly two hours after sunset, at 2000hrs on January 22, the task force started south. It was time to head for home.

TF38 would spend the next three days steaming to Ulithi. It had been met by fresh fleet oilers from TG30.8 shortly after reentering the Philippine Sea. The oilers had departed Ulithi even as those which had passed through Surigao Strait were heading to Ulithi. Jasper Acuff had done a masterful job of juggling oilers throughout. Having last refueled from Acuff's oilers on January 19, the ships of TF38 drank deep of the oil they carried on January 23. Even the battleships and fleet carriers needed fuel – they had been topping off the destroyers during that period.

For a change, the weather cooperated, the monsoon winds and waves that TF38 experienced during its days in the South China Sea deciding to take a rest. The two-day trip to Ulithi following refueling proved uneventful. TF38 arrived at Ulithi at 0600hrs on January 26, one hour shy of 28 days since it had departed.

for April, and naval intelligence wanted to gather as much information about the island as possible while avoiding drawing attention to this intelligence gathering. A series of strikes against airfields and shipping was a good way to camouflage the photography.

A wide variety of targets was attacked over the course of the day. Naha, Yontan, and Kadena – Japan's prewar airfields on Okinawa – were attacked. So was the Baten Ko seaplane base. An airfield was believed to be on Ie Shima; it was investigated and its presence confirmed. Another airstrip was reported to be on Kume Shima, west of Okinawa, but examination proved it did not exist. Further afield, the airstrips at Miyako Retto and Yayeyama Retto, in the southern part of the chain, were visited one more time for completeness. TF38 destroyed a total of 28 Japanese aircraft on the ground in these strikes. There were no enemy operations that day.

Shipping was also hit. The biggest prize that day was the 2,100-ton freighter *Hikosan Maru*, sunk between Ie Shima and Okinawa. In the outer Ryukyus, TF38 aircraft sank two small motor sailships – *Iroha Maru No.1* and *Myooei Maru* – and fishing boat *Waei Maru No.1*. The freighter *Suma Maru* was discovered in harbor at Kume Shima (probably by aircraft seeking the nonexistent airfield) and sunk. Two small



AFTERMATH AND ANALYSIS

At midnight on January 26, William Halsey struck his flag on the *New Jersey*, while Admiral Raymond Spruance raised his flag on the battleship, taking command. At that instant Third Fleet became Fifth Fleet, and the Fast Carrier Force transformed into Task Force 58. Only the commander and his staff changed. Fifth Fleet and the Fast Carrier Force contained the same ships – less casualties – they possessed when they departed Ulithi on December 30, 1944. Even *Hailey*, lent to TG30.8, returned to the Fast Carrier Force. Halsey and his staff would retire to plan operations against Japan, while Spruance and his staff prepared to execute the Iwo Jima and Okinawa operations they planned during Halsey's tenure with the Big Blue Fleet.

Before departing, Halsey sent a message expressing his pride and gratitude for the performance of the Third Fleet over the last four months. In it he described the sweep through the South China Sea as a hard operation and concluded by stating, "We have driven the enemy off the Sea and back to his inner defenses." It was a good summation of Third Fleet's accomplishment during that period. It had redefined Japan's outer defense perimeter. Indeed, in many ways the raid marked the beginning of the end of Imperial Japan.

Third Fleet spent 11 days in the South China Sea. During that period, TF38 steamed 3,800nmi in waters previously exclusively controlled by Japan. It met no real opposition from the Japanese and encountered no serious mishaps during that period. Yet the South China Sea excursion was only part of Third Fleet's activities, and measured by time was a minority part. Third Fleet remained continuously at sea over 27 days. Prior to entering the South China Sea, it had conducted four days of intense combat operations; after departing, it spent two more days hitting Japanese targets.

TF38 took a terrible toll on the Japanese. It claimed 625 aircraft destroyed, most on the ground. It also destroyed over 300,000 tons of enemy shipping. According to postwar assessment, 30 warships and up to 73 civilian vessels were sunk.

While TF38 was in the South China Sea, it sank the training cruiser *Kashii*. The tally was two cruisers if the Vichy French *Lamotte-Picquet* was included; it probably would have been

US success had been built on a foundation of logistics. The ability of TG30.8 to keep TF38 fueled and armed made the South China Sea operation possible. (USNHHC)



Although TF38 failed to find *Ise* and *Hyuga*, it took a heavy toll on Japanese warships during this mission. The losses felt most heavily by the Imperial Navy were those of its antisubmarine warfare vessels, such as this frigate, sunk off Indochina on January 12. (USNHC)

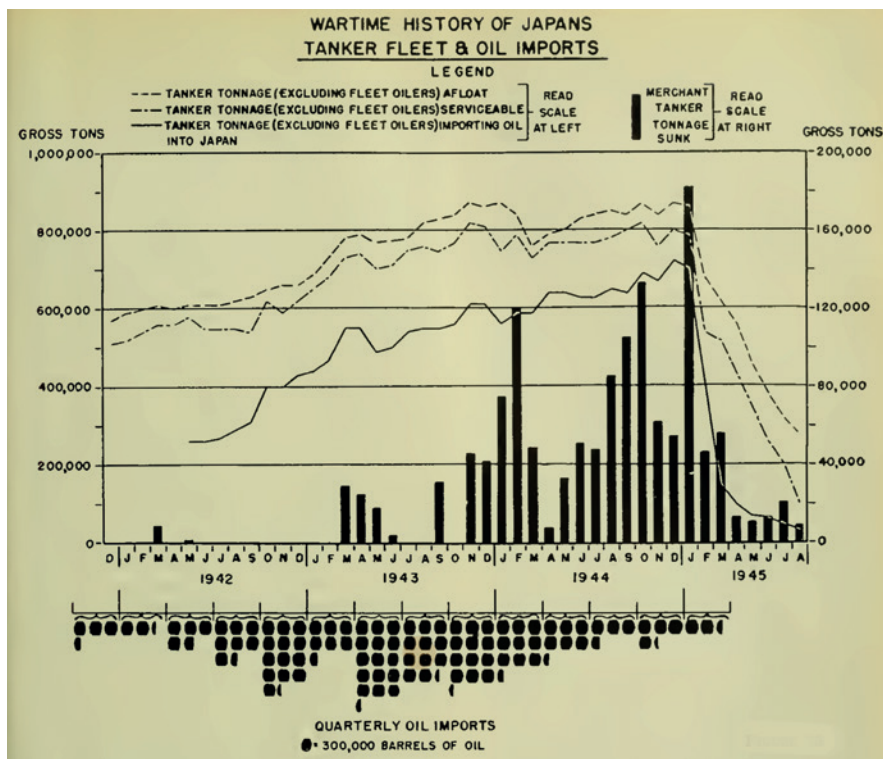
forcibly incorporated into the Imperial Japanese Navy when Japan overturned the Vichy regime following Germany's surrender. Also sunk were two destroyers, seven frigates, two submarine chasers, four minesweepers, one patrol boat, three tank landing ships, and two fast transports. A French survey ship can be added to that tally.

One frigate and two submarine chasers were sunk by Third Fleet around Formosa during the January 9 raids conducted before it entered the South China Sea. Another two tank landing ships and a guard boat were sunk at Formosa and the Ryukyus after TF38 departed the South China Sea. To that tally can be added the ships damaged by TF38 between January 9 and 22: four destroyers, ten frigates, three submarine chasers, two minesweepers, three fast transports, and a naval auxiliary.

Although the 30 warships lost by the Imperial Japanese Navy, and the 23 that were damaged, were second-string ships – auxiliaries, older warships, and small escort or patrol vessels – they were losses the Japanese could ill afford at this time. Most were antisubmarine vessels, a category in which Japan had critical shortages. The Allied submarine campaign had been draining Japan before January 1945. Japanese losses due to TF38 would stretch Japanese ASW resources still further.

Japan's merchant ship losses were even greater. Depending upon the sources, TF38 sent between 65 and 73 civilian vessels to the bottom of the sea, ranging from a 10,900-ton transport to a 250-ton motor sailship. Another score were damaged. Nearly three-quarters of these losses occurred when TF38 was in the South China Sea, with two-thirds of those occurring on January 12.

The biggest hit was in tankers, with Japan losing 175,000 tons worth of tankers to all causes during January 1945. It was Japan's worst month of the war for tanker losses, exceeding the combined total of all subsequent tanker losses through to the end of the war by 20 percent. Japan lost one-third of its tanker fleet in January. Over 150,000 tons of the tankers sunk in January were sent to the bottom by TF38, including seven over 10,000 tons in size.



The South China Sea raid devastated Japan's tanker fleet. Tanker losses neared 200,000 tons in January, the highest loss of any month in the war. This represented the destruction of nearly a quarter of Japan's total tanker fleet. (AC)

The cost to Third Fleet was almost trivial, with 201 carrier aircraft lost during the entire operation through all causes, combat and accident. Aircrew losses totaled 167. The January 21 kamikaze attacks killed 205 sailors and left another 350 wounded. One Essex-class carrier, an Independence-class light carrier, and a destroyer were damaged by combat, a second Essex-class carrier by misadventure. One Casablanca-class escort carrier was damaged by a typhoon in January. It was a remarkably low cost for what had been accomplished by TF38.

Several factors made TF38 as effective as it was during this campaign. The first was that the tactics the US Navy had developed since the beginning of 1944 had matured, with ineffective methods weeded out and valuable ones retained. This included tactics to fight kamikazes, which had been developed only a month earlier, yet had already been proven in battle. Tools like delousing occasionally failed. When they did, they generally lured kamikazes to attack the picket destroyer, less valuable than a carrier.

Examples of other tactics developed during 1944 and practiced during this operation included opening the day's operations with fighter sweeps, switching to mast-top bombing against merchant vessels and small warships, substituting fighter-bombers for dive-bombers, and using the Big Blue Blanket to smother kamikaze attacks.

Another important factor was the maturation of night-carrier operations. This had several positive effects, both offensive and defensive. Defensively, it provided air supremacy over US Navy carrier groups during the nighttime hours. It also robbed the Imperial Japanese Navy of its ability to attack US Navy surface ships at night, one of their last remaining offensive aerial tools in 1945. It was a major factor in TF38's ability to slip into the South China Sea undetected. Approaching aircraft were detected, intercepted, and disposed of before they could spot the US forces.

Night carriers were also a critical offensive tool. Predawn reconnaissance was conducted by night aircraft, which provided critical intelligence for the upcoming day's raids. Night fighters and bombers conducted predawn attacks on shore installations with the potential to

detect the presence of TF38 and provide warning of an upcoming attack. (The best example of that was the attack on Pratas Island, which silenced a radio-detection center.) They also enabled TG38 to strike harbors at night, providing a round-the-clock threat.

Another major factor contributing to US success was TG30.8, TF38's supply train. The TG30.8 oilers, escort carriers, and supply ships fueled TF38, replaced lost aircraft, and replenished ammunition. They did this over the course of four weeks, under adverse conditions; on several occasions they refueled ships under near-typhoon conditions. They never failed to provide fuel when it was needed. Without these vessels, the incursion into the South China Sea would have been impossible. Instead, it appeared effortless.

Even more remarkable, TF30.8 made a passage through the Luzon Strait, flanked on either side by Japanese-held islands with numerous Japanese airfields. Its ships then operated in the South China Sea, previously a Japanese-controlled lake, for ten days. They steamed with impunity where they wanted, establishing a shuttle service by which empty oilers were replaced by loaded ones from Ulithi. Acuff's supply operation was a masterpiece of planning and execution, a factor often ignored in naval history.

That 20-knot naval auxiliaries could steam so openly in the South China Sea was a testament to the demise of Japanese aerial strength and the rise of US Navy airpower during 1944. At the end of 1943, Japanese fliers were still holding their own against Allied pilots. Yet the systematic destruction of Japanese airpower over the course of 1944 – starting with Rabaul and New Guinea, and progressing through the air assaults on Truk and the battle of the Philippine Sea – meant that by October 1944 the *Kido Butai* was reduced to serving as a decoy during the battle of Leyte.

When the Pacific War began in December 1941, the Imperial Japanese Navy had some of the best pilots in the world, along with superior aircraft. Their pilots had averaged 700 hours of flight training under realistic conditions. Imperial Army pilots were less trained (with only 500 hours of training), but were at least as good as the US Army Air Force pilots they faced in the Philippines. Both services typically trained only small numbers of the best possible candidates.

Once the war started, the United States built a massive training infrastructure, while Japan kept its prewar training system intact through the first year of combat. When the Japanese finally expanded training, it was handicapped by shortages of both training aircraft and aviation fuel for flights. While the US Navy rotated its best combat pilots back to the United States, where they served as instructors, Japan kept its elite in combat until they were killed or badly injured. Moreover, whereas the US went to great lengths to recover and preserve downed pilots, Japan neglected rescuing theirs.

The result was a precipitous drop in the quality of Japan's aircrews between the start of 1943 and the start of 1945. Pilot training times plummeted; by January 1945, Imperial Navy pilots were being sent into combat with only 250 hours of flight time and Imperial Army pilots with less than 150. Additionally, the Japanese Navy and Army introduced kamikaze tactics in October and November respectively. After a burst of initial success, the kamikaze campaign further drained the pool of experienced pilots. Only a few experienced pilots remained; the rest had rudimentary flying skills, and inadequate navigation and bombing training.

What few experienced pilots remained were stationed where the Allies were expected, and not in the South China Sea. The kamikazes were husbanded to attack the fleet expected for the Luzon invasion. Because of their deficient navigation, many found it a challenge to find a stationary fleet known to be in Lingayen Gulf. There were few combat-ready Japanese aircraft in the airbases surrounding the South China Sea, and except in Formosa, no kamikaze units. There were simply too few aircraft to allow Japan to provide an in-depth air garrison in the South China Sea.

The result was a massacre. TF38's first attacks at Formosa and Luzon between January 3 and 7 destroyed Japan's most capable warplanes. After that, so long as it remained in the



The US Army Air Force and shore-based naval patrol squadrons operating out of Luzon finished the job started by TF38. By April 1945, travel between Japan and the ports reached through the South China Sea was completely severed. (AC)

South China Sea, TF38 could strike at will with little fear of a Japanese counterstrike. There were too few Japanese aircraft to penetrate the CAP of either TF38 or the escort carriers in TG30.8. Even those few proved incapable of finding the Third Fleet while it remained in the Sea of Japan.

The consequence of all this was inevitable. As Halsey observed while reporting the results of the January 12 strikes on Indochina, “Japanese supply routes from Singapore, Malaya, Burma and the Dutch East Indies were severed, at least temporarily.”

Temporary soon became permanent. The buildup of US-controlled airfields in Mindoro and Luzon assured that. Even as TF38 was attacking Formosa for the final time in this campaign on January 21, US Army Air Force B-24s sank the Japanese salvage vessel *Haruta Maru* at Hong Kong. Within a month of that, gun B-25s, modified to strike ships, were beginning to range the South China Sea in search of prey, operating from newly opened airfields in Luzon.

The Army Air Force opened a bombing campaign against Formosa on January 22, the day after TF38’s final visit. Over the next two months, the bombers neutralized Japanese airpower in Formosa, destroyed Formosa’s industries, and denied its resources to the Home Islands. More importantly, they completely isolated Japan from its holdings on the southern fringe of the South China Sea. Oil shipped to Japan in February plunged 50 percent from what it had been in January. Japan was also starved of critically needed rubber, metals, and food. Singapore, Malaya, Burma, and the Dutch East Indies became isolated outposts. Japan was reduced to the condition that motivated it to begin the Pacific War – and unable to reverse it.

Surviving aircraft and ships

It is probable that no Japanese aircraft that fought in this campaign survived. Many were destroyed on the ground over the course of the campaign. Of those which got into the air, the majority were shot down or expended as kamikazes. Most of those that survived were destroyed in the Army Air Force campaign that followed that by TF38 in the South China Sea. The few which survived the war were scrapped in its aftermath. They were second- or third-line aircraft in 1944, and after the war ended they were more valuable as scrap metal than as aircraft. Even examples of the types of aircraft used in this campaign are scarce because relatively few Japanese military aircraft survived World War II. Most consist of bits and pieces of different aircraft put together to form one complete aircraft.

Of the most commonly used Japanese aircraft, few examples remain. Some 30 A6M Zeros still exist, along with a few replicas. Two D4Ys (along with Zeros used as kamikazes during

An F6F-5 on display at the Kalamazoo Aviation History Museum in Kalamazoo, Michigan. This was the most commonly used Hellcat variant during the South China Sea campaign. (Michael Barera photograph, Wikimedia Commons)



this campaign), two Ki-27s, five Ki-43s, and one Ki-84 are known to survive. Most are not flyable, and some are not on display. Most are in museums in Japan and the United States. No Ki-27s are known to exist.

There are many more surviving examples of the types of Allied aircraft which fought the kamikazes, including flyable examples. The Allies won the war, and the late-war variants of the participating aircraft were far more likely to survive during postwar years. Whether any of these actually participated in TF38's sweep through the South China Sea is hard to say. With 190 examples, it would be nice to believe at least one flew with Third Fleet during January 1945. However, it is beyond my ability to determine whether one of the survivors did.

Of the fighters, 31 Wildcats still exist, most of them the various FM types built by General Motors and flown off escort carriers in this campaign. Most are in the United States, including 15 airworthy examples. There are also 31 surviving F6F Hellcats, one in Britain, the rest in the United States. Sixteen are airworthy and 14 under restoration. None appears to be radar-equipped F6F-3Es, F6F-3Ns, or F6F-5Ns. Some 60 F4Us survive, with 45 in the United States, including 26 that are airworthy. This total includes several postwar aircraft which could not have participated in the South China Sea raid, but which are representative of those that did.

Seventy-nine Avengers still survive, including 42 that are airworthy. A surprising number, 24, were built as radar-equipped TBM-3Es flown off *Enterprise* and *Independence* in this campaign. Not all of these still have their radars. SB2C Helldivers are considerably more scarce. Only nine exist, seven in the United States. Just one is airworthy, owned by the Commemorative Air Force, which preserves World War II-era combat aircraft.

For those interested in seeing the different types of aircraft which participated in the South China Sea campaign – Japanese and Allied – your best choice seems to be the Pima Air and Space Museum in Tucson, Arizona.

Several ships that participated also remain, including seven fast battleships, Essex-class carriers *Yorktown* and *Lexington*, and the Fletcher-class destroyers *The Sullivans* and *Cassin Young*. *The Sullivans* is at the Buffalo and Erie County Naval & Military Park in Buffalo, New York. *Cassin Young* is now part of Boston National Historical Park in Massachusetts. All of these ships are open to visitors.

FURTHER READING

The most important source for this book was Volume XIII of Morison's *History of United States Naval Operations in World War II: The Liberation of the Philippines: Luzon, Mindanao, the Visayas: 1944–1945*. Its sections on Third Fleet's cruise from December 30, 1944, to January 26, 1945, provided an outline for the Campaign section of this book. It was supplemented by other volumes in Morison's series, as well as MacArthur's report on Japanese activities, the fifth volume of the Army Air Force official history, and postwar assessments, including the JANAC report and Cressman's chronology. The last two filled in important details about what was attacked and what happened.

Other sources supplied other details, including Carter's excellent *Beans, Bullets, and Black Oil*, which covered the logistics involved (a critical and often overlooked aspect of this campaign). There was a scavenger hunt aspect to finding missing details. This included going to numerous websites and printed sources for a single vital fact or two. I also used four online sources for information on weapons, ships, and facilities:

<http://www.navweaps.com/>

<https://www.wrecksite.eu/>

<https://www.navsource.org/>

<https://pacificwrecks.com/>

All proved extremely valuable in delivering data when needed.

Off duty in the crew quarters of the aircraft carrier *Yorktown*. Sleep, reading letters from home, or writing them were popular pastimes when off-duty (AC)



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Author's note

I have consistently used period names for places in this book. The main reason for this decision is that the events in this book took place nearly 75 years ago, and the world has changed in that time. Not just the names; the appearances of harbors, islands, and other landmarks have been altered over those years. Compare the appearance of Hong Kong harbor in the period maps and photos in this book with its appearance in Google Earth today. The differences will amaze you. Besides, names will continue to change. Will it still be Hong Kong in 50 years or will the name be altered to one more pleasing to the Chinese government? It is Formosa not Taiwan, Canton not Guangzhou, French Indochina not Vietnam, and Saigon not Ho Chi Minh City. Those names are anachronistic today, but using today's names would be equally anachronistic. The following abbreviations indicate the sources of the illustrations used in this volume:
AC – Author's Collection
USAF – United States Air Force
USNHHC – United States Navy Heritage and History Command

Author's dedication

To my newest granddaughter, Sophia Thienai Lardas. Grandchildren are God's blessings.